TM 5-3825-223-12 DISTRIBUTOR, WATER, TANK, TYPE 1000 GAL CAPACITY—1970

TM 5-3895-224-15

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL FIELD AND DEPOT MAINTENANCE MANUAL

SPREADER, AGGREGATE TOWED; 8 FT SPREAD

(GARWOOD MODEL M5-8 FT) SERIAL NUMBERS 101 THROUGH 200, FSN 3895-836-7324

This copy is a reprint which includes current pages from Changes 1 through 3.

HEADQUARTERS, DEPARTMENT OF THE ARMY
OCTOBER 1961

AGO 1876A

TM 5-3895-224-15
TO 36C 24-12-1
C 3

CHANGE NO. 3

DEPARTMENTS OF THE ARMY
AND THE AIR FORCE
WASHINGTON, D.C., *16 August 1973*

Operator, Organizational, Field, and Depot Maintenance Manual SPREADER, AGGREGATE: TOWED 8 FT SPREAD (GARWOOD MODEL M5-8FT) SERIAL NUMBERS: 101 THROUGH 200 and 201 THROUGH 374, FSN 3895-836-7324

TM 5-3895-224-15, 3 October 1961, is changed as follows:

Page 1. In the table of contents, Appendix III is superseded as follows:

Appendix III. BASIC ISSUES ITEMS LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED

Page 2. Subparagraph 1*d* is superseded as follows:

d. You can improve this manual by calling attention to errors and by recommending improvements, using DA Form 2028 (Rcommended Changes to Publications), or by letter, and mailing direct to Commander, U.S. Army Troop Support Command, ATTN: AMSTS-MP, 4300 Goodfellow Blvd. St. Louis, MO. 63120.

Page 63. Appendix III is superseded as follows:

APPENDIX III
BASIC ISSUE ITEM LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED
Section I. INTRODUCTION

1. Scope

This appendix lists basic issue items, items troop installed or authorized which accompany the spreader and are required by the crew/operator for operation, installation, or operator's maintenance.

2. General

This basic issue items, items troop installed or authorized list is divided into the following sections:

a. Basic Issue Items List — Section II. Not applicable

b. Items Troop Installed or Authorized List - Section III. A list in alphabetical sequence of items which at the discretion of the unit commander may accompany the end item, but are NOT subject to be turned in with the end item.

3. Explanation of Columns

The following provides an explanation of columns in the tabular list of Basic Issue Items List, Section II, and Items Troop Installed or Authorized, Section III.

a. Source, Maintenance, and Recoverability Code(s) (SMR): Not applicable.

b. Federal Stock Number. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. This column indicates the Federal item name and any additional description of the item required.

d. Unit of Measure (U/M). A 2-character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based e.g., ft, ea, pr, etc.

e. Quantity Authorized (Items Troop Installed or Authorized Only). This column indicates the quantity of the item authorized to be used with the equipment.

Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

(1) SMR Code	(2) Federal stock number	(3) Description Ref No. & Mfr code	Usable on code	(4) Unit of meas	(5) Qty auth
	5120-930-7221	JACK, BUMPER		EA	1

By Order of the Secretaries of the Army and the Air Force:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

JOHN D. RYAN, *General, USAF*
Chief of Staff

Official:

JACK R. BENSON, *Colonel, USAF*
Director of Administration

Distribution:
To be distributed in accordance with DA Form 12-25B (qty rqr block No. 454), Organizational maintenance requirements for Spreaders, Aggregate.

TECHNICAL MANUAL

Operator, Organizational, Field, and Depot Maintenance Manual

SPREADER, AGGREGATE: TOWED; 8 FT SPREAD (GARWOOD MODEL M5–8 FT) SERIAL NUMBERS: 101 THROUGH 200 AND 201 THROUGH 374, FSN 3895–836–7324

TM 5–3895–224–15
CHANGE NO. 2

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *24 September 1963*

TM 5–3895–224–15, 3 October 1961, is changed as follows:

The title is changed to read as shown above.

1. Scope

* * * * *

d. (Superseded) The direct reporting by the individual user of errors, omissions and recommendations for improving this manual is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Technical Manual Parts Lists or Supply Manual 7, 8 or 9) will be used for reporting these improvements. This form will be completed in triplicate using pencil, pen, or typewriter. The original and one copy will be forwarded direct to the Commanding Officer, U. S. Army Mobility Support Center, ATTN: SMOMS–MM, P. O. Box 119, Columbus, Ohio 43216. One information copy will be provided to the individual's immediate supervisor, (e.g., officer, noncommissioned officer, supervisor, etc.).

e. (Superseded) Report all equipment improvement recommendations as prescribed by TM 38–750.

2. Record and Report Forms
(Superseded)

DA Form 2258 Depreservation Guide of Engineer Equipment

For other record and report forms applicable to the maintenance of this equipment, refer to TM 38–750.

Note. Applicable forms, excluding standard Form 46 which is carried by the operator, shall be kept in a canvas bag mounted on the equipment.

Paragraph 3. Line 1. After "(figs. 1" insert ", 1.1,"

Figure 1. Caption. After "dimensions" add "Serial numbers 101 thru 200".

5. Differences in Models
(Superseded)

This manual covers only the Garwood Aggregate Spreader Model M5 — 8 FT., Serial numbers 101 through 200 and 201 through 374.

Page 10. Figure 6. Caption. After "removal." add "Serial numbers 101 thru 200."

Page 15. Figure 10. Caption. After "installation". add "Serial numbers 101 thru 200."

Page 16, paragraph 13*b*.(4). Line 1. Delete "List" and substitute "Lift".

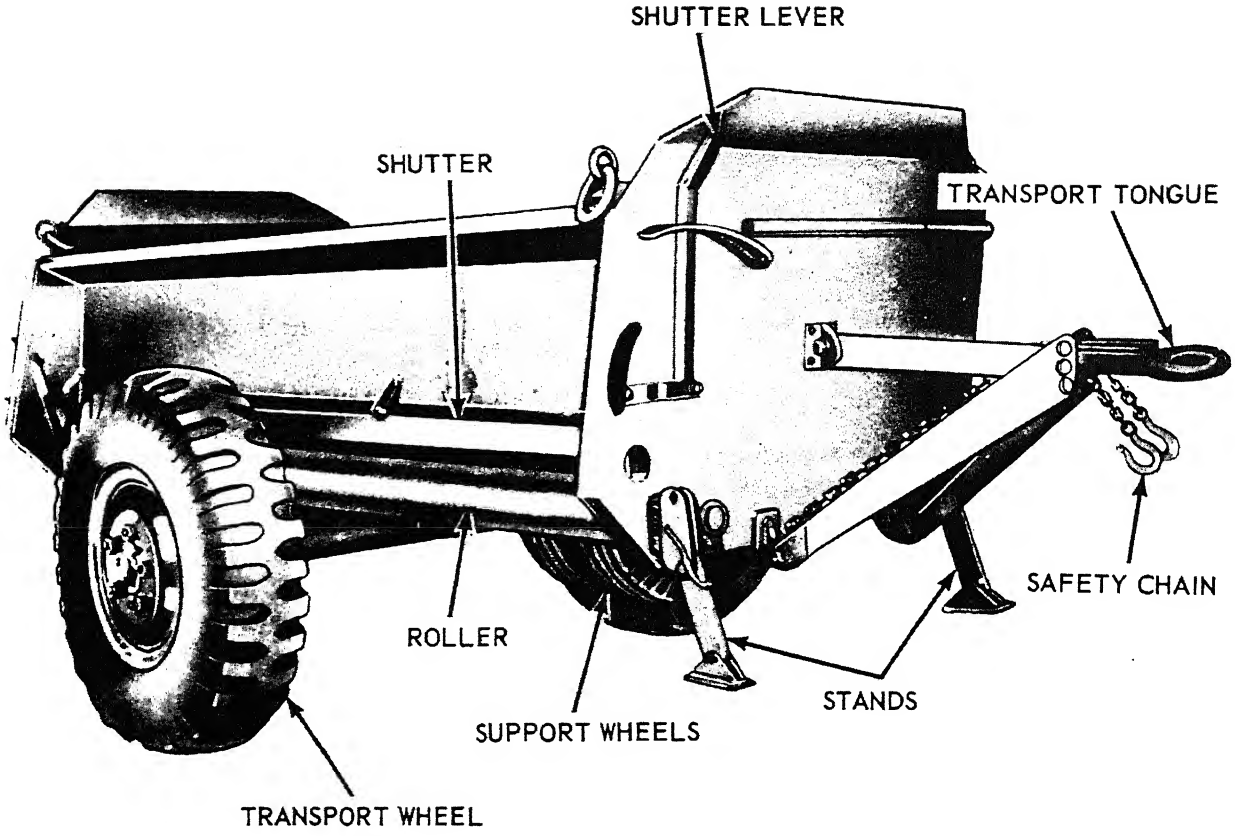
Page 33. Figure 19. Caption. After "view." add "Serial numbers 101 thru 200."

Figure 20. Caption. After "view." add "Serial numbers 101 thru 200."

73. Inspection and Maintenance of Equipment in Storage
(Superseded)

a. Inspection. When equipment has been placed in storage, all scheduled preventive maintenance services, including inspection, shall be suspended and preventive maintenance inspection shall be performed as specified herein. Refer to AR 743–505.

b. Worksheet and Preventive Maintenance.

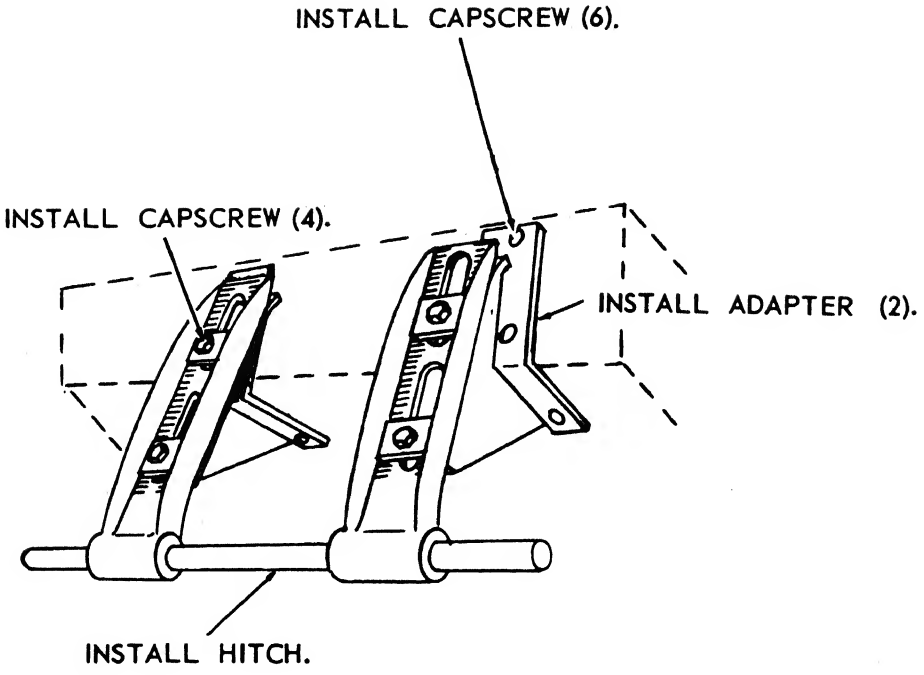


SHIPPING DIMENSIONS

LENGTH	110 INCHES
WIDTH	72 INCHES
HEIGHT	55 INCHES
WEIGHT	2,300 LBS

MSC 3895-224-15/1.1 C2

Figure 1.1. (Added) *Aggregate spreader, right front, three-quarter view, and shipping dimensions. Serial numbers 201 through 374.*



MSC 3895-224-15/6.1 C2

Figure 6.1. (Added) *Truck hitch installation and removal. Serial numbers 201 through 374.*

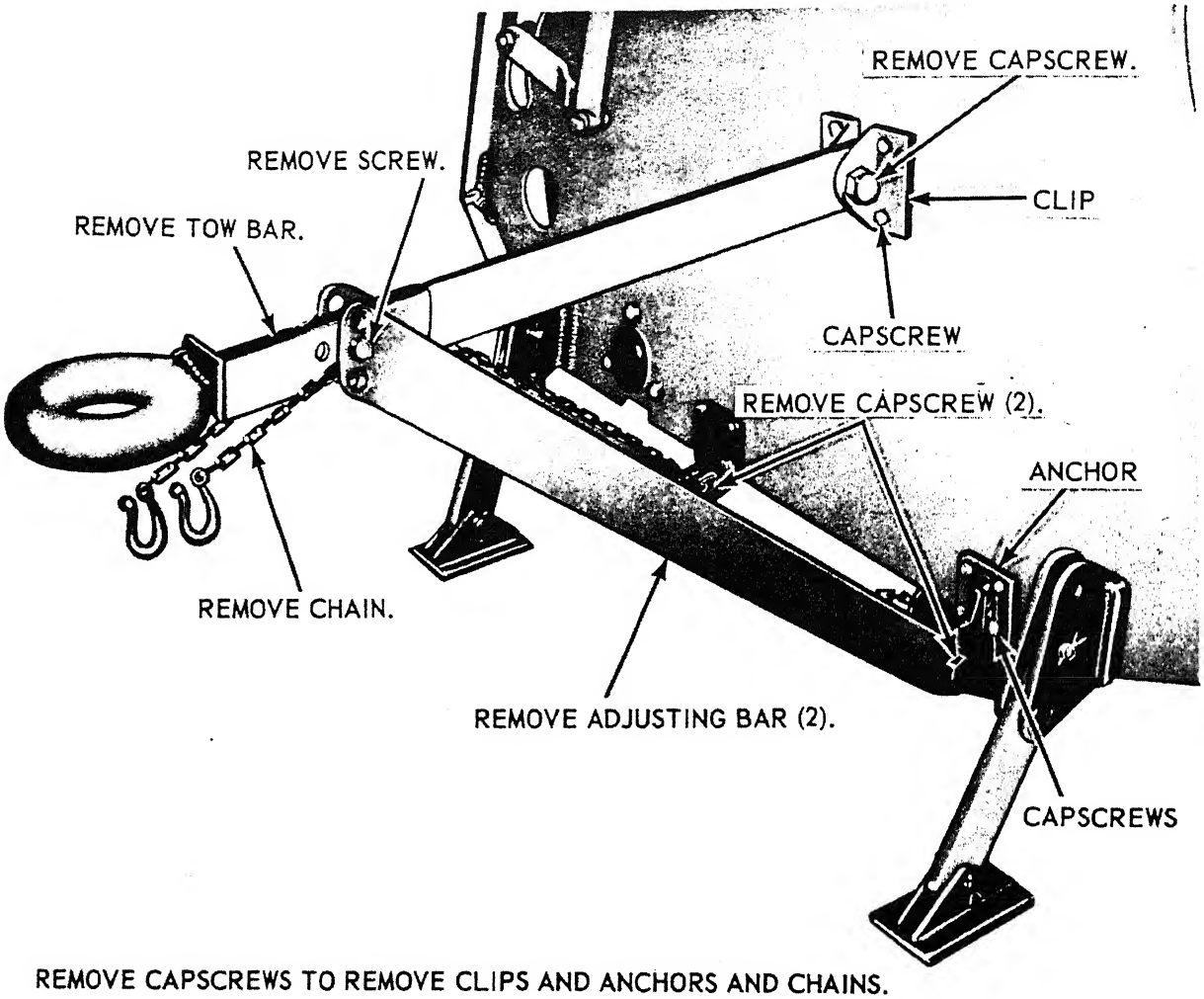


Figure 10.1. (Added) *Transport tow bar assembly, removal and installation. Serial numbers 201 through 374.*

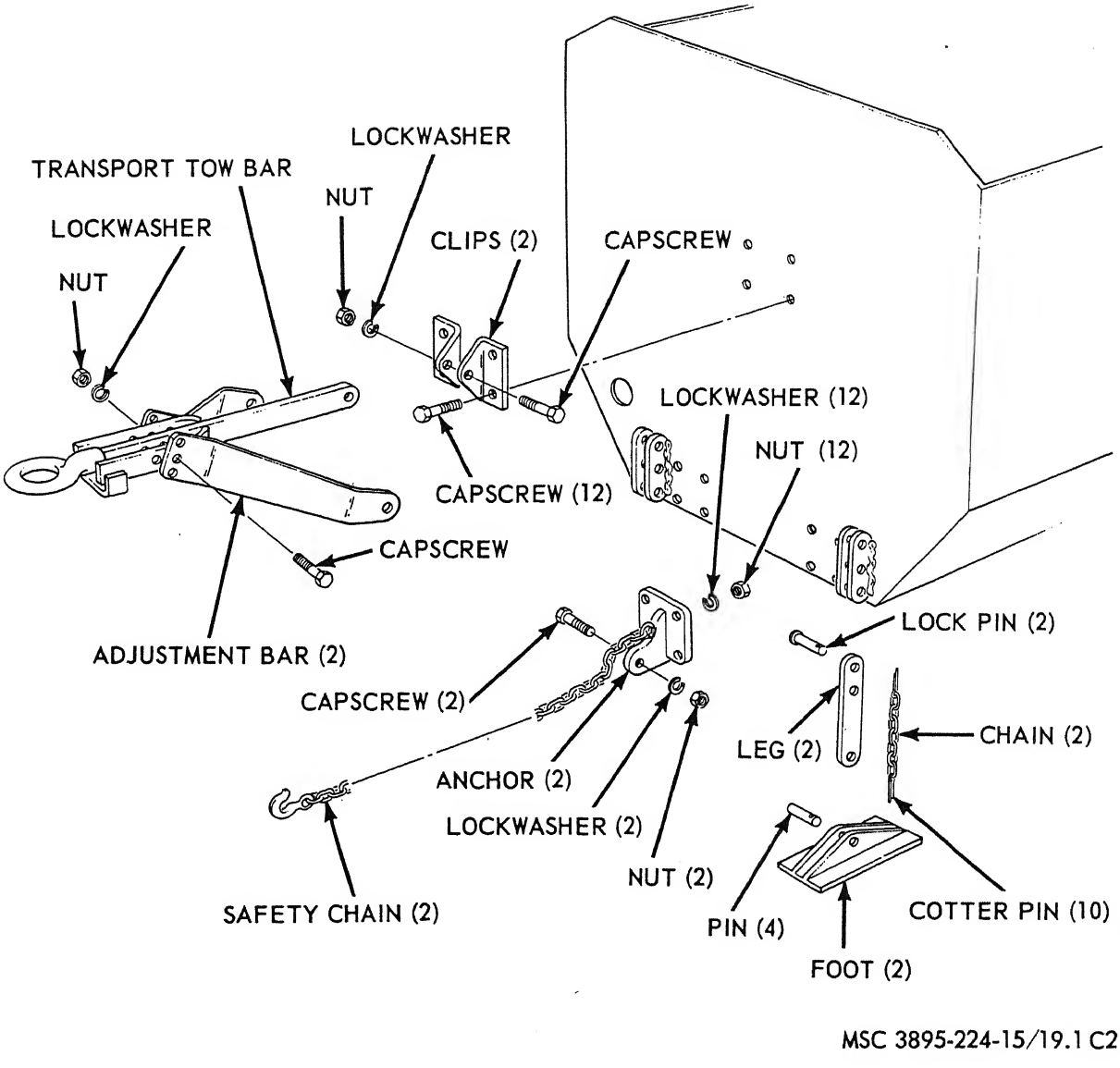


Figure 19.1. (Added) ***Transport tow bar and stand assemblies, dissassembly and reassembly, exploded view. Serial numbers 201 through 374.***

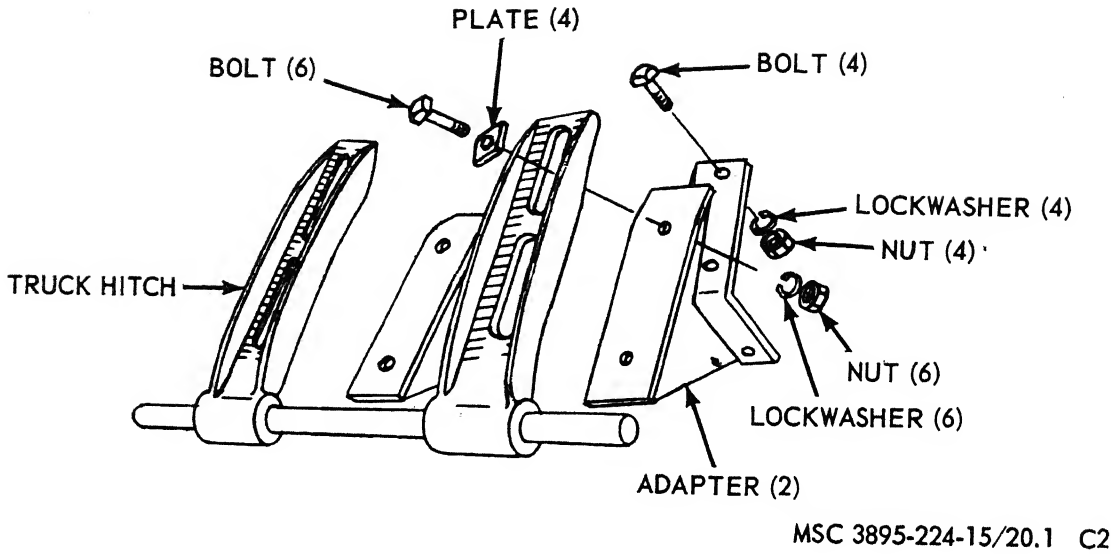


Figure 20.1. (Added) *Truck hitch assembly, disassembly and reassembly, exploded view. Serial numbers 201 through 374.*

DA Form 2258 (Depreservation Guide of Engineer Equipment) and applicable forms listed in TM 38-750 shall be prepared for each major item of equipment when initially placed in limited storage and every 90 days thereafter perform required maintenance promptly to make sure equipment is mechanically sound and ready for immediate use.

c. *Exercising.* Service equipment in limited storage every 90 days in accordance with paragraph 31. Operate equipment long enough to bring it up to operating temperature and insure complete lubrication of all bearings, gears, and the like. Represerve equipment after operation.

Page 55. Paragraph 75. Line 1 thru 3. Delete and substitute as follows:

For record and report form refer to paragraph 2.

Page 59. Paragraph 4. Lines 1 and 2. Delete and substitute as follows:

TM 38-750 The Army Equipment Records System and Procedures

Paragraph 5. Line 1. Delete.

Page 64. Paragraph 4. Delete in its entirety and substitute as follows:

4. Reporting of Equipment Manual Improvements

The direct reporting by the individual user of errors, omissions, and recommendations for improving this manual is authorized and encouraged. DA Form 2028 (Recommended changes to DA Technical Manual Parts Lists or Supply Manual 7, 8, or 9) will be used for reporting these improvements. This form will be completed in triplicate using pencil, pen, or typewriter. The original and one copy will be forwarded direct to the Commanding Officer, U. S. Army Mobility Support Center, ATTN: SMOMS-MM, P. O. Box 119, Columbus, Ohio 43216. One information copy will be provided to the individual's immediate supervisor, (e.g., officer, noncommissioned officer, supervisor, etc.).

By Order of the Secretary of the Army:

EARLE G. WHEELER,
General, United States Army,
Chief of Staff.

Official:
J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

Distribution:
Active Army:
USASA (2)
DSCLOG (1)
CNGB (1)
TSG (1)
CofEngrs (3)
CSigO (1)
CofT (1)
USA Maint Bd (1)
USAARTYBD (2)
USAARMBD (2)
USAIB (2)
USARADBD (2)
USAAESBD (2)
USAAVNBD (2)
USCONARC (3)
OS Maj Comd (5) except
USARJ (10)
MDW (1)
Armies (2)
Corps (2)
USA Corps (2)
Div (2)
Engr Bde (1)
USMA (2)
Svc Colleges (2)
Br Svc Sch (2) except
USAES (100)
GENDEP (OS) (10)
Engr Dep (OS) (10)
Army Dep (2)
USA Trans Tml Comd (2)
Army Tmls (1)
USAMC (5)
USAMOCOM (2)
USAOSA (2)
Div Engr (2)
Engr Dist (2)
USAERDL (3)
Engr Fld Maint Shops (2)
Engr Cen (5)
AMS (3)
Chicago Engr Proc Ofc (10)
USA Mob Spt Cen (36)
ESCO (10)
Fld Comd, DASA (8)
USACOMZEUR (2)
USAREUR Engr Sup
Con Agcy (10)
USAREUR Engr Proc
Cen (2)
MAAG (1)
JBUSMC (1)
Units org under fol TOE:
5-48 (2)
5-114 (2)
5-115 (2)
5-117 (2)
5-237 (5)
5-262 (5)
5-267 (1)
5-278 (5)
5-279 (2)
5-500 (EA, EB) (2)
NG: State AG (3).
USAR: Same as Active Army except allowance is one copy to each unit.
For explanation of abbreviations used, see AR 320-50.

TECHNICAL MANUAL

Operator, Organizational, Field, and Depot Maintenance Manual

SPREADER, AGGREGATE: TOWED; 8 FT SPREAD (GARWOOD MODEL M5–8 FT) SERIAL NUMBERS: 101 THROUGH 200, FSN 3895–836–7324

TM 5–3895–224–15
CHANGES No. 1

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *16 August 1963*

TM 5–3895–224–15, 3 October 1961, is changed as follows:

Page 2.

d. (Superseded) Report all deficiencies in this manual on DA Form 2028. Submit recommendations for changes, additions, or deletions to the Commanding Officer, U. S. Army Mobility Support Center, ATTN: SMOMS–MM, P. O. Box 119, Columbus, Ohio 43216. Direct communication is authorized.

e. (Superseded) Report all equipment improvement recommendations as prescribed by TM 38–750.

2. Record and Report Forms
(Superseded)

a. DA Form 2258 (Depreservation Guide of Engineer Equipment).

b. For other record and report forms applicable to operator and organizational maintenance, refer to TM 38–750.

Note. Applicable forms, excluding Standard Form 46 (U. S. Government Motor Vehicle Operator's Identification Card), which is carried by the operator, shall be kept in a canvas bag mounted on the equipment.

Page 7, paragraph 8*c*, line 1. Delete "before-operation" and substitute: daily preventive maintenance

Page 14, paragraph 12*g*, line 1. Delete "before-operation" and substitute: daily preventive maintenance

28. General
(Superseded)

To insure that the spreader is ready for operation at all times, it must be inspected systematically, so that defects may be discovered and corrected before they result in serious damage or failure. The necessary Preventive Maintenance Services to be performed are listed and described in paragraphs 29 and 31. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the unit shall be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noted during operation which would damage the equipment if operation were continued. All deficiencies and shortcomings will be recorded, together with the corrective action taken, on DA Form 2404 (Equipment Inspection and Maintenance Worksheet) at the earliest possible opportunity.

29. Daily Preventive Maintenance Services
(Superseded)

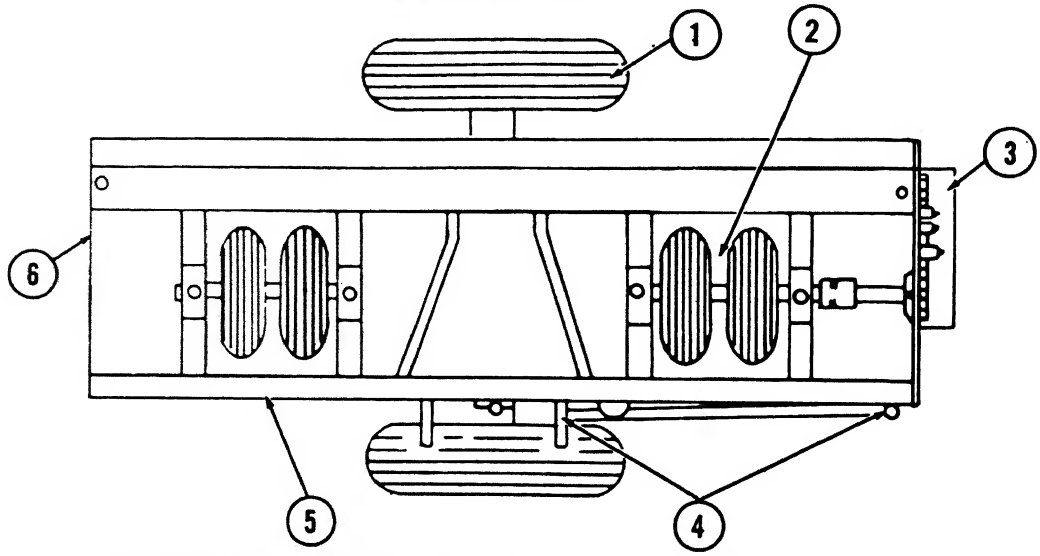
This paragraph contains an illustrated tabulated listing of preventive maintenance services which must be performed by the operator. The item numbers are listed consecutively and indicate the sequence of minimum requirements. Refer to figure 15 for the Daily Preventive Maintenance Services.

PREVENTIVE MAINTENANCE SERVICES

DAILY

TM5-3895-224-15 AGGREGATE SPREADER

GARWOOD MODEL M5-8 FT



LUBRICATE IN ACCORDANCE WITH CURRENT LUBRICATION ORDER

ITEM		PAR REF
1	TRANSPORT TIRES AND WHEELS. Check for cut, damaged or excessively worn tires. Correct tire pressure is 50 pounds. (Weekly)	
2	TRACTION TIRES AND WHEELS. Check for cut, damaged, or excessively worn tires. Correct tire pressure is 60 pounds. (Weekly)	
3	CLUTCH. Check for proper engagement.	
4	SPREADER HITCH AND HANDLE. Check for freedom of movement.	
5	HOPPER. Check for damage. (Weekly)	
6	SHUTTER AND SHUTTER LEVER. Check for freedom of movement.	
	NOTE 1. OPERATION. During operation observe for any unusual noise or vibration.	

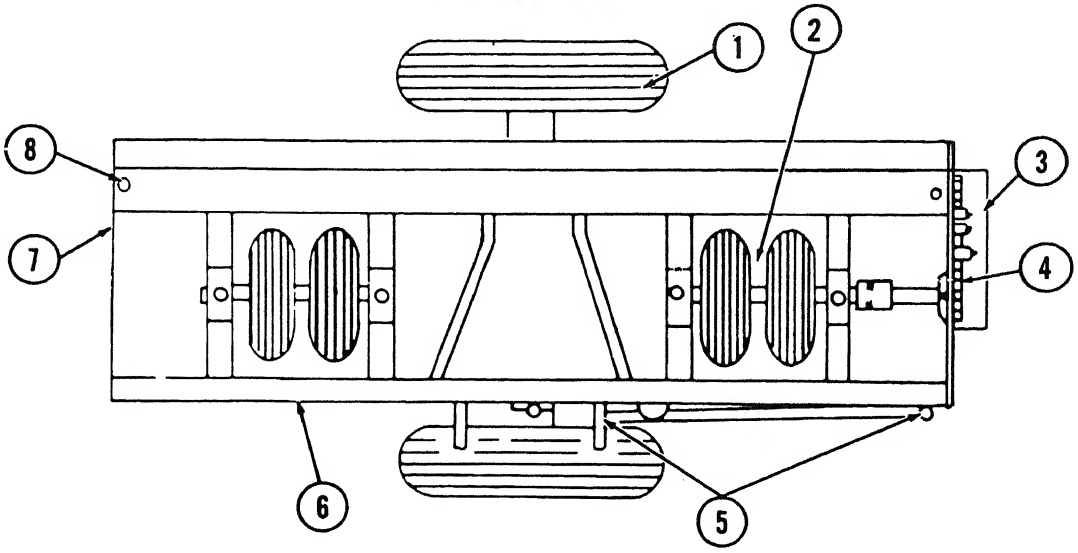
MSC 3895-224-15/15

Figure 15. (Superseded) *Daily preventive maintenance services.*

PREVENTIVE MAINTENANCE SERVICES

QUARTERLY

TM5-3895-224-15 | GARWOOD MODEL M5-8 FT | AGGREGATE SPREADER



LUBRICATE IN ACCORDANCE WITH CURRENT LUBRICATION ORDER

ITEM		PAR REF
1	TRANSPORT TIRES AND WHEELS. Replace cut, damaged, or excessively worn tires. Correct tire pressure is 50 pounds. Replace defective wheel.	42
2	TRACTION TIRES AND WHEELS. Replace cut, damaged, or excessively worn tires. Correct tire pressure is 60 pounds. Replace damaged wheel.	60
3	CLUTCH. Replace defective clutch.	57
4	CHAINS. Adjust as neceesary. Replace defective chain.	57
5	SPREADER HITCH AND HANDLE. Replace defective hitch and handle.	48
6	HOPPER. Check for damage.	
7	SHUTTER AND SHUTTER LEVER. Check for freedom of movement. Replace if necessary.	54 55
8	ROLLER ASSEMBLY. Replace defective roller.	58
	NOTE 1. OPERATIONAL TEST. During operation observe for any unusual noise or vibration.	
	NOTE 2. ADJUSTMENTS. Make all necessary adjustments during operational test.	

MSC 3895-224-15/15.1

Figure 15.1. (Added) *Quarterly preventive maintenance services.*

Page 27, paragraph 30. (Rescinded)

31. Quarterly Preventive Maintenance Services
(Superseded)

a. This paragraph contains an illustrated tabulated listing of preventive maintenance services which must be performed by Organizational Maintenance personnel at quarterly intervals. A quarterly interval is equal to 3 calendar months, or 250 hours of operation, whichever occurs first.

b. The item numbers are listed consecutively and indicate the sequence of minimum requirements. Refer to figure 15.1 for the Quarterly Preventive Maintenance Services.

Page 53, paragraph 70*b*, lines 4, 5, and 6. Delete "DA Form 464 (Work Sheet for Preventive Maintenance and Technical Inspection of Engineer Equipment)" and substitute: DA Form 2404 (Equipment Inspection and Maintenance Worksheet).

73. Inspection and Maintenance of Equipment in Storage
(Superseded)

a. Inspection. When equipment has been placed in limited storage, all scheduled preventive maintenance services, including inspection, shall be suspended and preventive maintenance inspection shall be performed as specified herein. Refer to AR 743–505.

b. Worksheet and Preventive Maintenance. Applicable forms listed in TM 38–750 shall be prepared for each major item of equipment when initially placed in limited storage, in accordance with the scheduled interval contained in AR 743–505. Perform required maintenance promptly to make sure equipment is mechanically sound and ready for immediate use.

c. Operation. Operate equipment in limited storage long enough to insure complete lubrication of all bearings, gears, and the like, in accordance with the scheduled interval contained in AR 743–505. Equipment must be serviced and in satisfactory operating condition before it is operated.

75. Record and Report Forms
(Superseded)

For record and report forms applicable to field and depot maintenance, refer to TM 38–750.

Note. Applicable forms, excluding Standard Form 46, which is carried by the operator, will be kept in a canvas bag mounted on the equipment.

Page 59, paragraph 4.

TM 5–505 (Rescinded)
Add the following:

TM 38–750	The Army Equipment Record System and Procedures.

Page 64.

4. Comments and Suggestions
(Superseded)

Suggestions and recommendations for changes to the Basic Issue Items List will be submitted on DA Form 2028 to the Commanding Officer, U. S. Army Mobility Support Center, ATTN: SMOMS–MM, P. O. Box 119, Columbus, Ohio 43216. Direct communication is authorized.

By Order of the Secretary of the Army:

EARLE G. WHEELER,
General, United States Army,
Chief of Staff.

Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

Distribution:

Active Army:

USASA (2)
DCSLOG (1)
CNGB (1)
TSG (1)
CofEngrs (3)
CSigO (1)
CofT (1)
USA Maint Bd (1)
USAARTYBD (2)
USAARMBD (2)
USAIB (2)
USAARADBD (2)
USAAESWBD (2)
USAAVNBD (2)
USCONARC (3)
USAMC (5)
OS Maj Comd (5) except
  USARJ (10)
MDW (1)
Armies (2)
Corps (2)
USA Corps (2)
Div (2)
Engr Bde (1)
USMA (2)
Svc College (2)
Br Svc Sch (2) except
  USAES (100)
GENDEP (OS) (10)
Engr Dep (OS) (10)
Army Dep (2)
USA Trans Tml Comd (2)
Army Tml (1)
USAMOCOM (2)
USAOSA (2)
Div Engr (2)
Engr Dist (2)
Engr Fld Maint Shops (2)
USAERDL (3)
Engr Cen (5)
AMS (3)
Chicago Engr Proc Ofc (10)
USA Mob Spt Cen (36)
ESCO (10)
Fld Comd, DASA (8)
USACOMZEUR (2)
USAREUR Engr Sup Con Agcy (10)
USAREUR Engr Proc Cen (2)
MAAG (1)
JBUSMC (1)
Units org under fol TOE:
  5-48 (2)
  5-114 (2)
  5-115 (2)
  5-117 (2)
  5-237 (5)
  5-262 (5)
  5-267 (1)
  5-278 (5)
  5-279 (2)
  5-500 (EA, EB) (2)

NG: State AG (3).
USAR: Same as Active Army except allowance is one copy to each unit.
For explanation of abbreviations used, see AR 320-50.

TECHNICAL MANUAL
No. 5-3895-224-15

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D.C., *3 October 1961*

Operator, Organizational, Field, and Depot Maintenance Manual

SPREADER, AGGREGATE: TOWED; 8 FT SPREAD (GARWOOD MODEL M5-8 FT) SERIAL NUMBERS: 101 THROUGH 200, FSN 3895-836-7324

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1. Scope

a. These instructions are published for use of the personnel to whom the Garwood Aggregate Spreader Model MS–8 FT is issued. Chapters 1 through 5 provide information on the operation, daily preventive maintenance services, and organizational maintenance of the equipment, accessories, components, and attachments. Chapter 6 provides information for field and depot maintenance (3d, 4th, and 5th echelons). This manual also provides descriptions of the main units and their functions in relationship to other components.

b. Appendix I contains a list of publications applicable to this manual. Appendix II contains the maintenance allocation chart. Appendix III contains the list of basic issue items authorized the operator of this equipment. The organizational, field, and depot maintenance repair parts and special tools are listed in TM 5–3895–224–25P.

c. Numbers in parentheses on illustrations indicate quantity. Numbers preceding nomenclature callouts on illustrations indicate the preferred maintenance sequence.

d. Report all deficiencies in this manual on DA Form 2028. Submit recommendations for changes, additions, or deletions to the Commanding General, Military Construction Supply Agency/U. S. Army Engineer Maintenance Center, Corps of Engineers, ATTN: MCSDM, P.O. Box 119, Columbus 16, Ohio. Direct communication is authorized.

e. Report unsatisfactory equipment performance and suggestions for equipment improvement as specified in AR 700–38.

2. Operator and Organizational Maintenance Record and Report Forms

For record and report forms applicable to the operator, crew and organizational maintenance, refer to TM 5–505.

Note. Applicable forms, excluding standard Form 46 which is carried by the operator, shall be kept in a canvas bag mounted on the equipment.

Section II. DESCRIPTION AND DATA

3. Description

The Garwood Aggregate Spreader (figs. 1 and 2) is a towed-type, traction-powered spreader. The spreader has transport wheels (fig. 1) and a transport tongue arrangement for transporting the spreader over the highway. The shutter has a maximum opening of 2½ inches, and with the continual rotation of the spirally fluted roller a smooth even spread of material is obtained. The maximum spread width is 8 feet and is adjustable from 8 feet to 4 feet in one-foot increments, by the use of the four blocking plates furnished with the spreader. The operator adjusts the taper and thickness of the spread by two controls: a clutch control handle (fig. 2) and a shutter control lever (fig. 1). Identical shutter control levers are located on each side of the spreader. A more detailed description of the specific components is provided in the applicable maintenance sections of this manual.

4. Identification and Tabulated Data

a. Identification. The aggregate spreader has two identification plates.

(1) *Corps of Engineers data plate.* The Corps of Engineers data plate (A, fig. 3) is located on the rear panel of the hopper. The plate contains the manufacturer's name, the serial, and model numbers of the equipment.

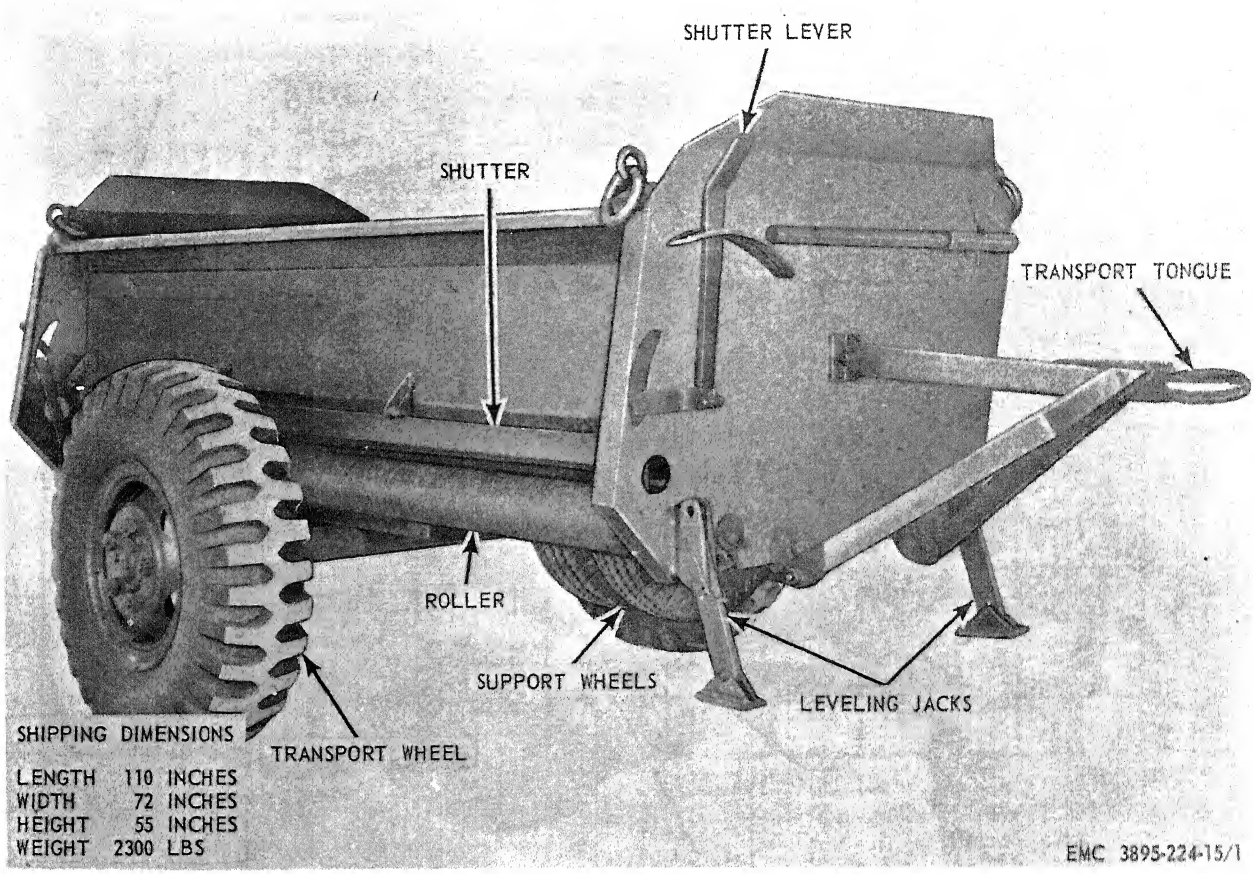


Figure 1. Aggregate spreader, right-front, three-quarter view, and shipping dimensions.

(2) *Manufacturer's nameplate.* The manufacturer's nameplate (B, fig. 3) is located on the top rear panel of the hopper. The plate lists the name of the manufacturer and the model and serial number.

b. Tabulated Data.

(1) *Spreader.*

Manufacturer	Garwood Industries, Inc.
Model No.	M5-8 FT
Feed control gage opening (maximum).	2½ in. (inch) (es)
Outer wheel tread to edge of spread.	8⅜ in.
Width of tread (outside wheels).	59¼ in.
Spreader box-plate thickness.	3/16 in.
Drive wheel mounting antifriction pillow blocks reversing feed roll drive.	Chain drive
Feed roll	5 3/16 in. dia (diameter) fluted spirally.
Safety platform	Detachable (expanded metal).
Block-off plates	6 in.

(2) *Dimension and weights.*

Width of spread (maximum).	8 ft (foot) (feet)
Overall length	110 in.
Overall width	72 in.
Overall height	55 in.
Box capacity	1 cu yd
Weight:	
Spreader w/4 pneumatic tires.	2,300 lb (pound) (s)
Transport unit	600 lb
Operator's safety platform.	100 lb
Tires:	
(600 x 9–6 ply industrial standard).	4
(900 x 16–8 ply industrial standard).	2

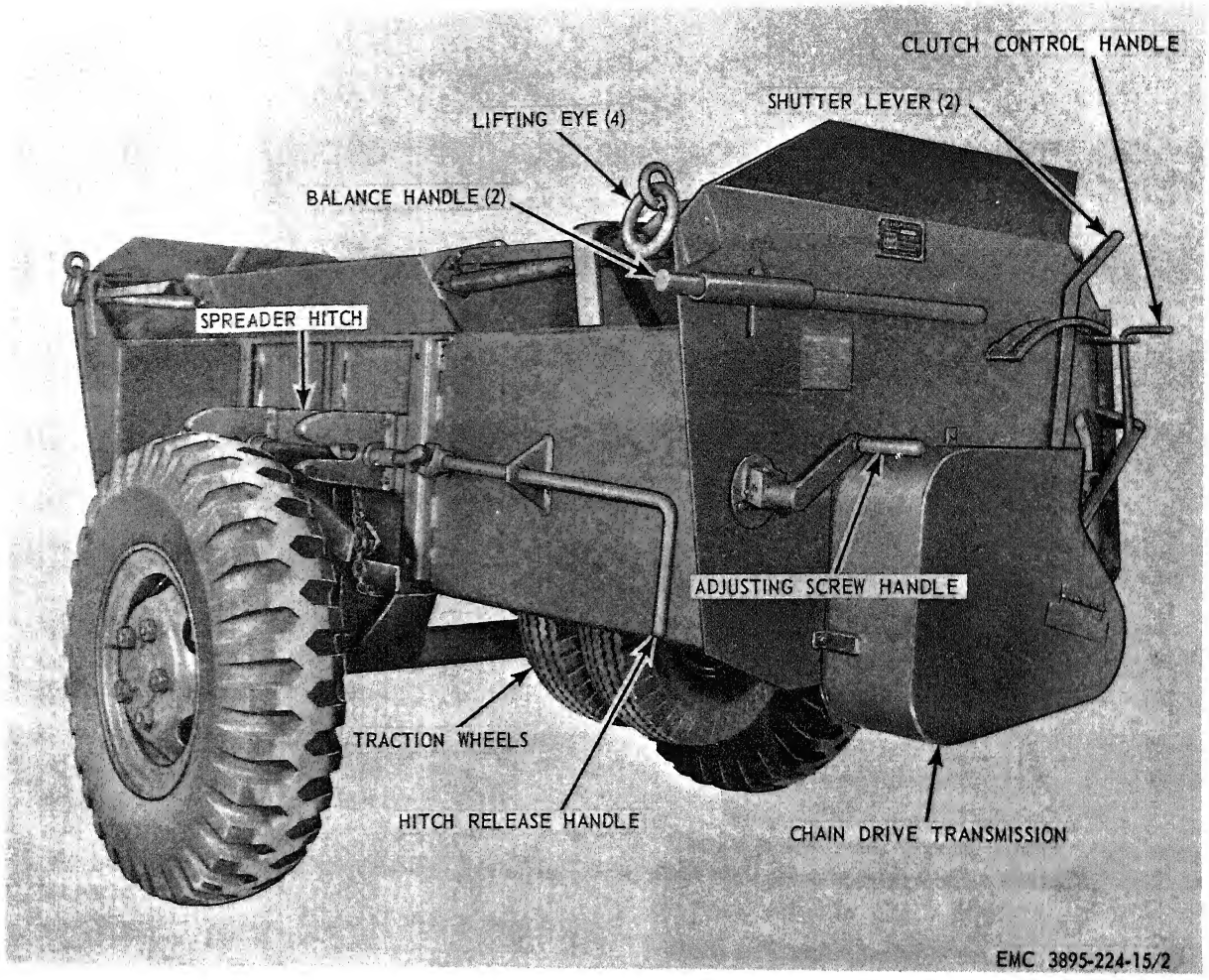
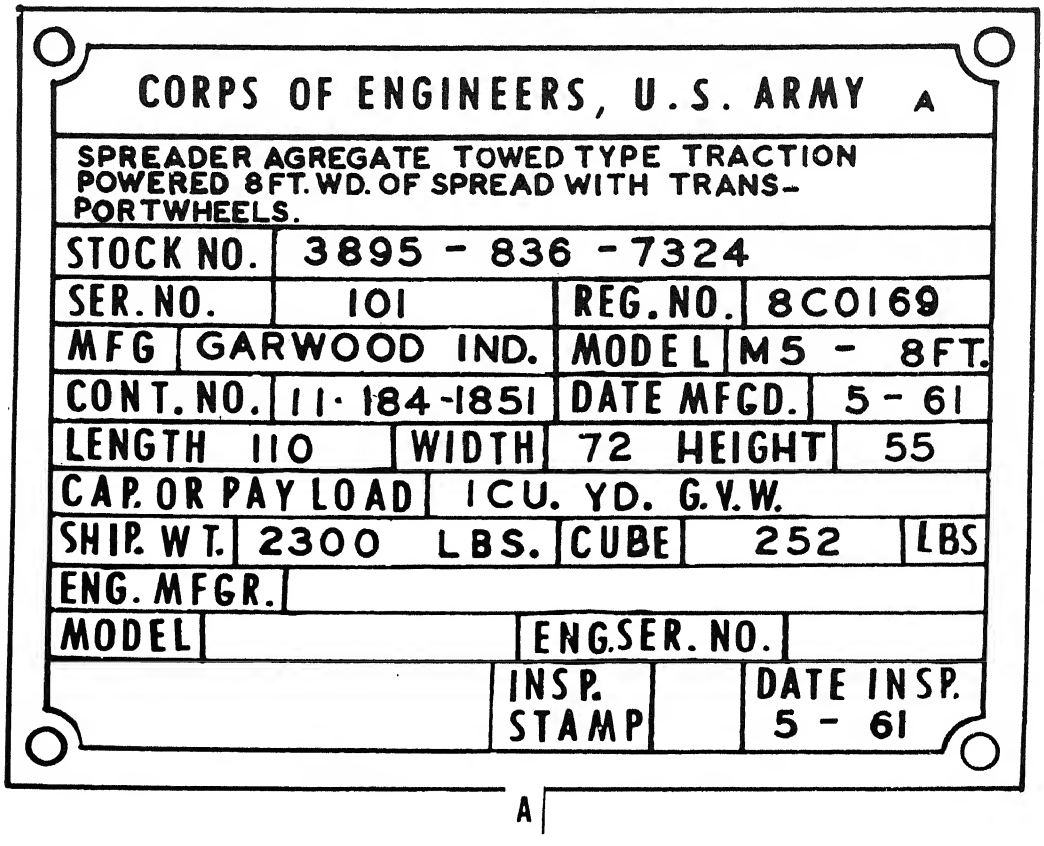
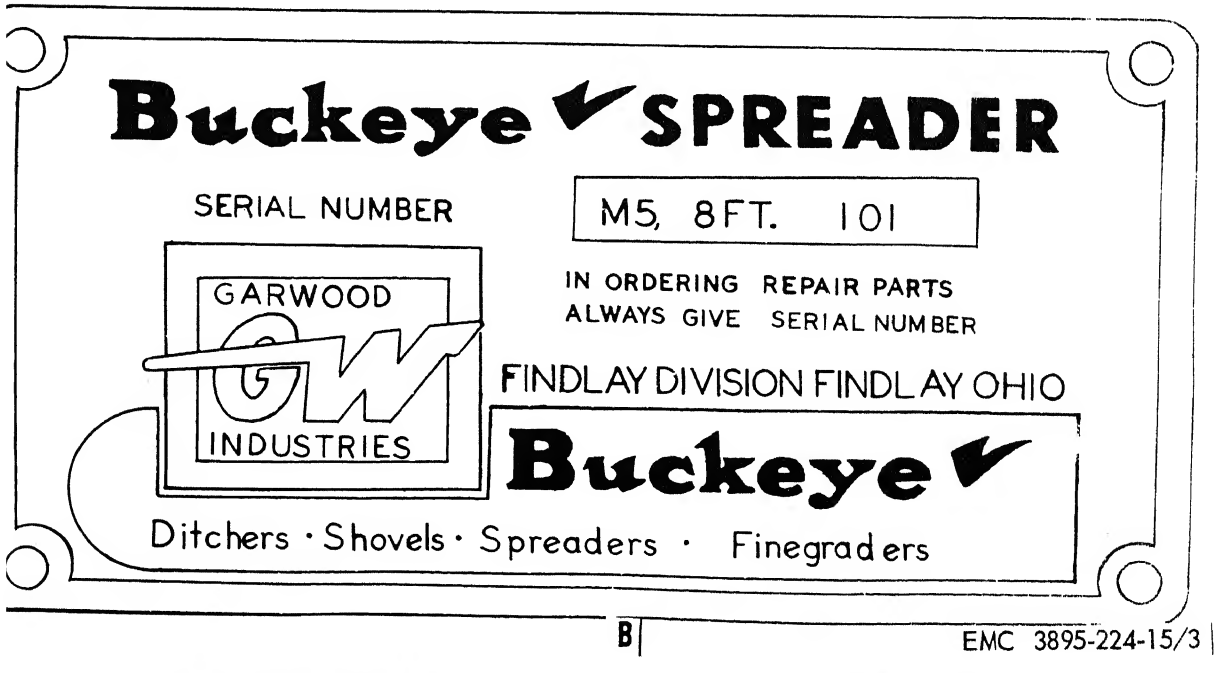


Figure 2. Aggregate spreader, left-rear, three-quarter view.

Tire pressure (transport) __50 lb
Tire pressure (traction) ____60 lb

(3) *Maintenance and operating supplies.* Refer to table I for a complete list of maintenance and operating supplies required for initial operation of the aggregate spreader.





A—Corps of Engineers data plate

B—Manufacturer's nameplate

Figure 3. Identification and data plates.

Table I. Maintenance and Operating Supplies

Item	Component application	Bureau of supply	Federal stock No.	Description	Quantity required for initial operation	Quantity required for 8 hours operation	Notes
1	GREASE-POINTS.	10	9150–190–0905	GREASE, AUTOMOTIVE AND ARTILLERY: 5-pound can ---------GAA---------	2 lb	(1)	(1) See current LO for grade application and replenishment intervals.

5. Differences in Models

This manual covers only the Garwood Aggregate Spreader Model M5–8 FT. No known unit differences exist for the model covered in this manual.

CHAPTER 2
INSTALLATION AND OPERATION INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

6. Unloading the Aggregate Spreader

a. Blocking and Tie-down Removal. Remove all blocking and tie-down cables as illustrated in figure 4.

b. Unloading by Crane.

(1) Remove all tie-down cables and blocks. Refer to figure 4.

(2) Install slings on the four lifting eyes (fig. 4) and, using a lifting device of at least 1½ tons capacity, lift the spreader from the flatcar to the ground.

Caution: **Be sure aggregate spreader has sufficient clearance before unloading.**

(3) Place blocks under the tongue to hold the spreader level.

(4) Remove the slings and lifting device.

c. Unloading by Ramp.

(1) Place suitable ramp, as illustrated in figure 5, in position at the end of the flatcar.

(2) Remove all tie-downs and blocking (fig. 4), and tow the spreader off of the flatcar; be sure the transport tires are properly inflated before towing the spreader.

7. Unpacking Equipment

a. Cut the wire which secures the operator's platform and wooden packing box inside the spreader hopper. Remove the box, platform, and adapter hitch.

b. Remove cover from wooden packing box and remove the two jacks, four block-off plates, mounting bolts, and all attaching hardware.

c. Remove all protective tape and paper from the spreader.

d. Using a suitable solvent remove all protective coating from the exposed parts.

8. Inspection of New Equipment

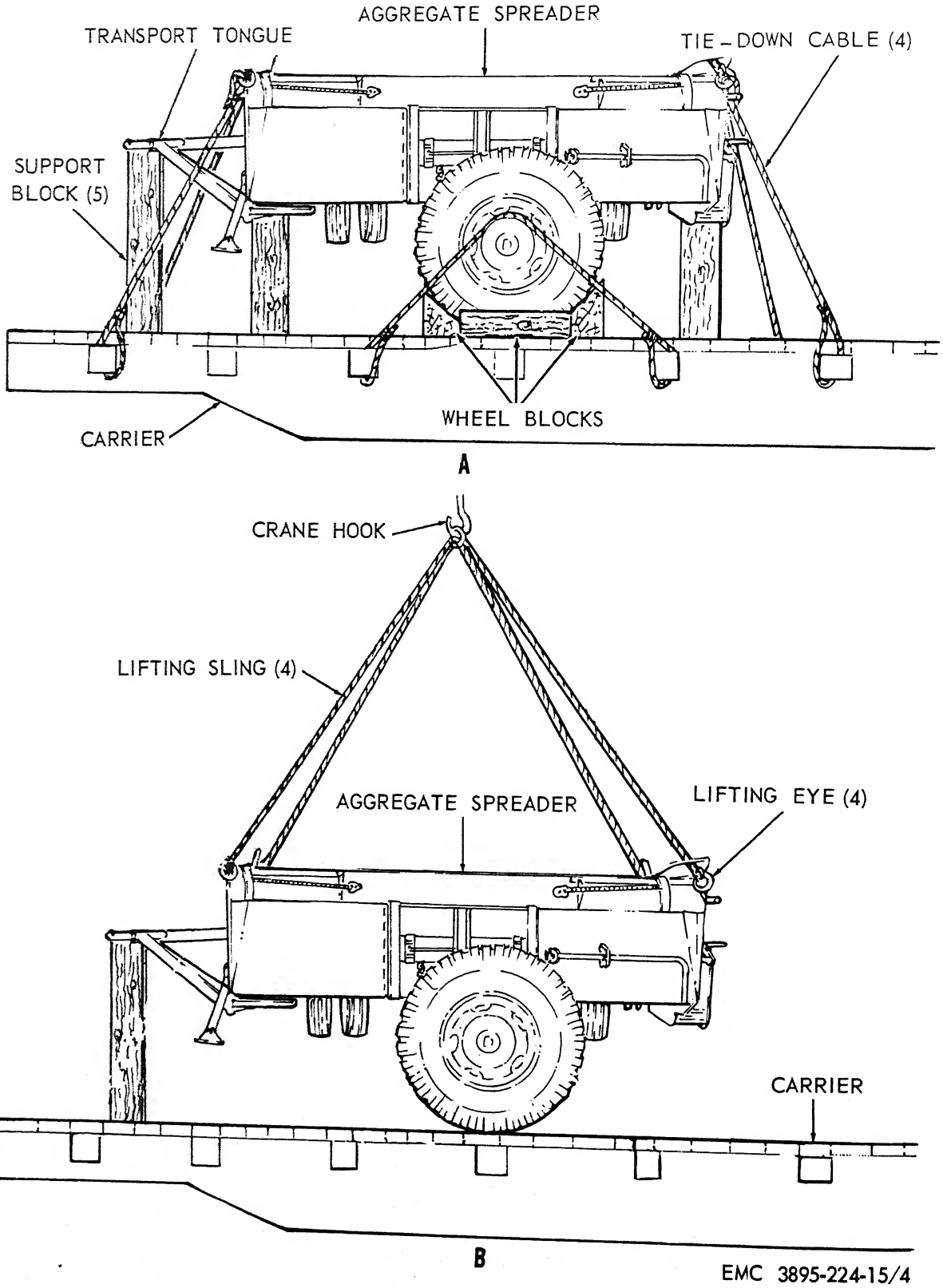
a. Inspect the aggregate spreader for broken or missing parts.

b. Make a complete visual inspection to see that the required tools, repair parts, publications, and attachments are on or with the spreader.

c. Perform before-operation services listed in paragraph 29.

d. Lubricate the spreader in accordance with LO 5–3895–224–15.

e. Inflate tires to proper pressure (par. 4).



A—Blocking and tie-down position

B—Lifting sling position

Figure 4. Aggregate spreader loaded for shipment.

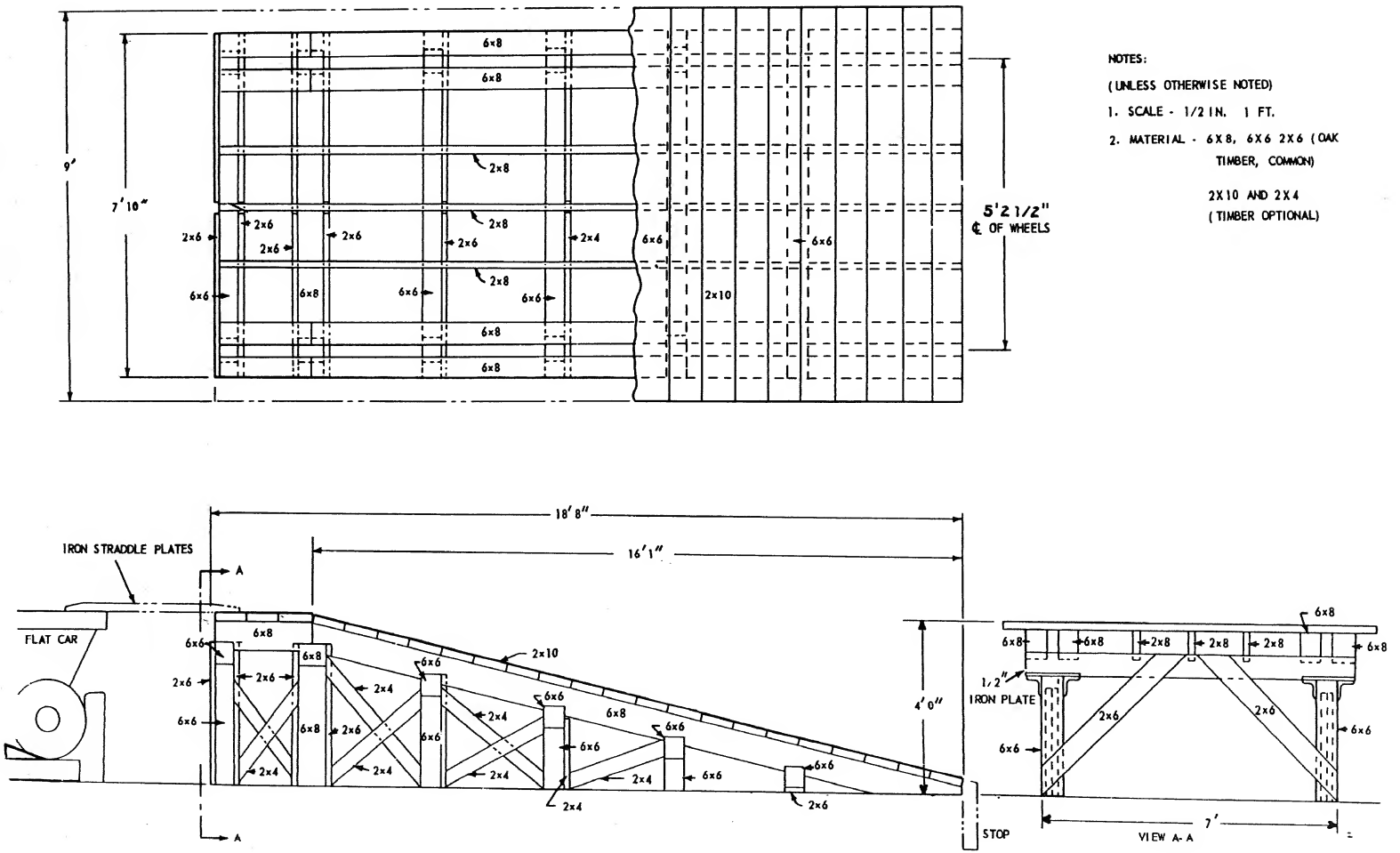


Figure 5. Unloading ramp.

9. Installation of Separately Packed Components

a. Truck Hitch. Install the truck hitch as illustrated in figure 6.

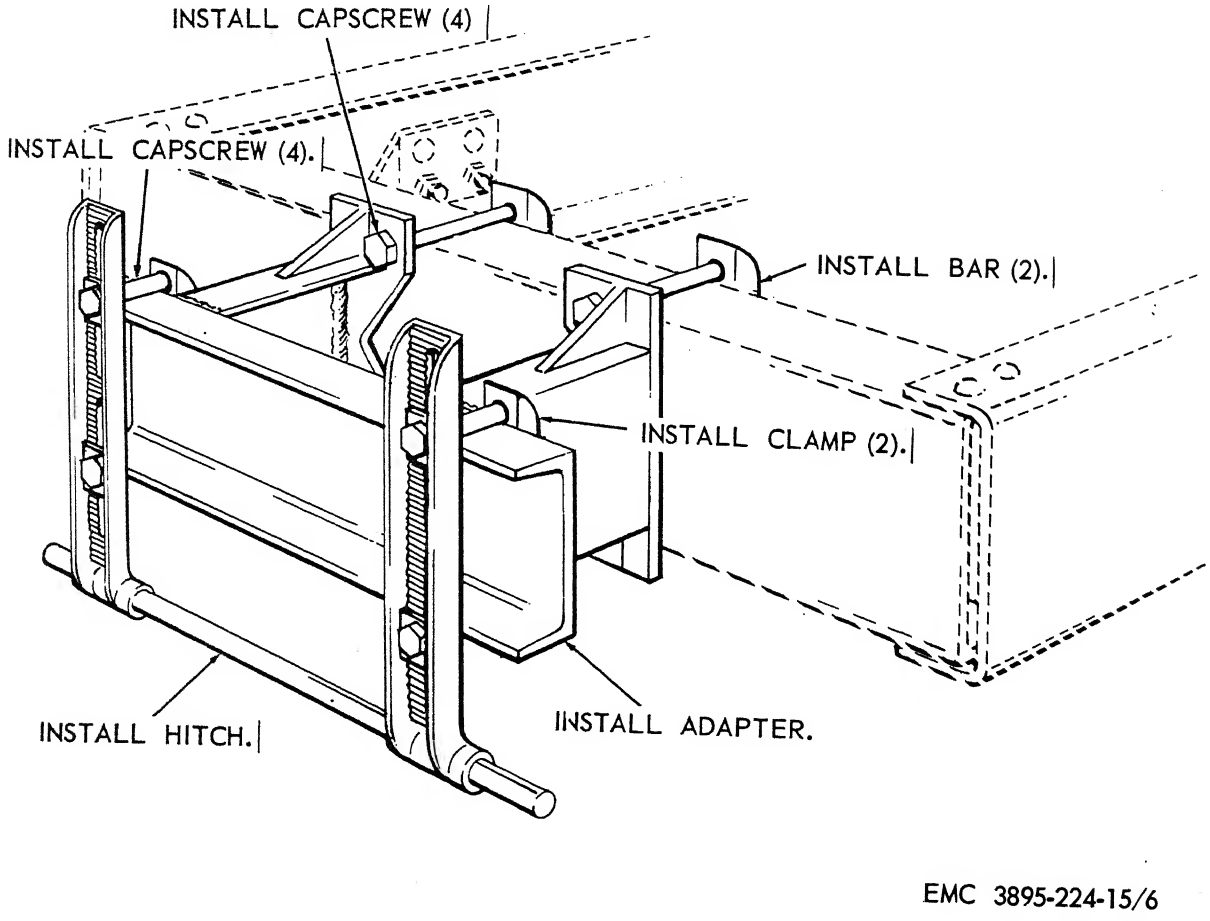


Figure 6. Truck hitch installation and removal.

b. Operator's Platform. Install the operator's platform as illustrated in figure 7.

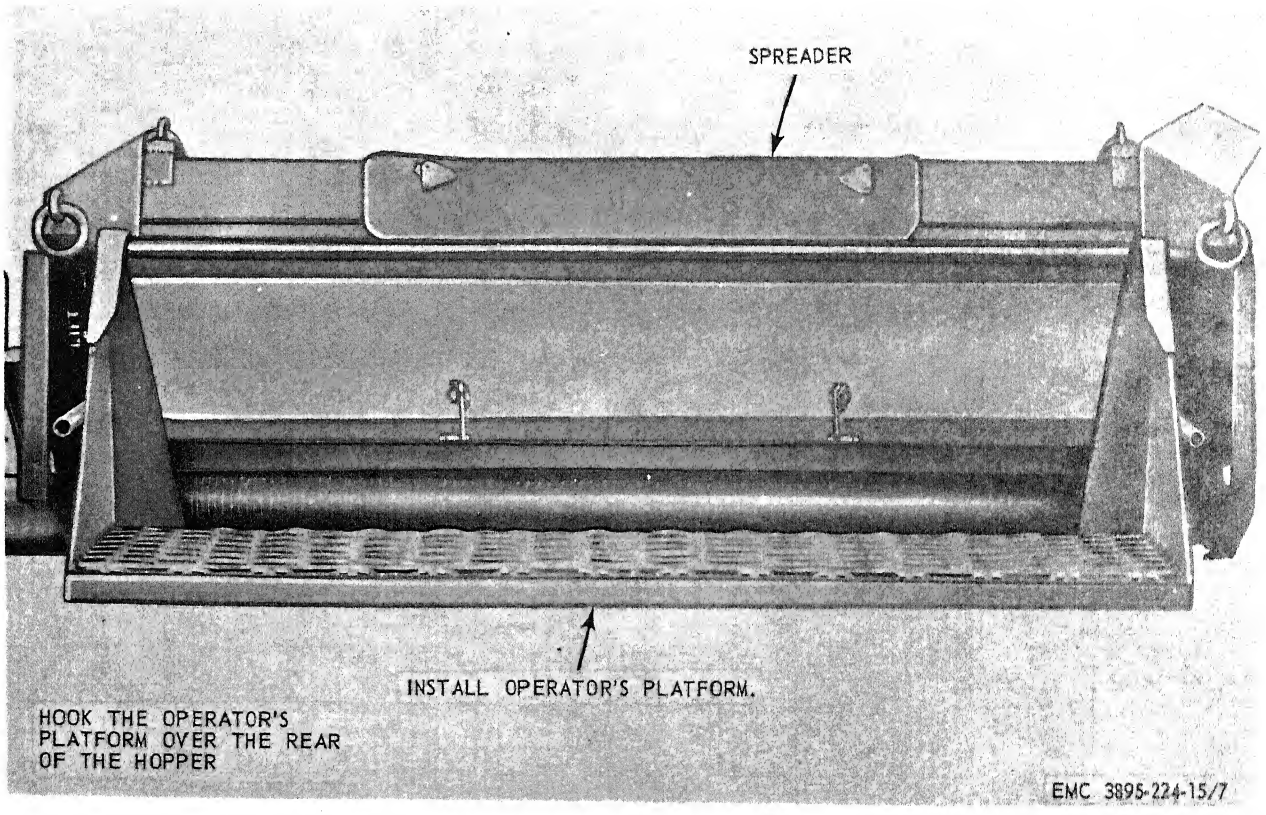


Figure 7. Operator's platform installation and removal.

c. Block-off Plates. Install the block-off plates as illustrated in figure 8.

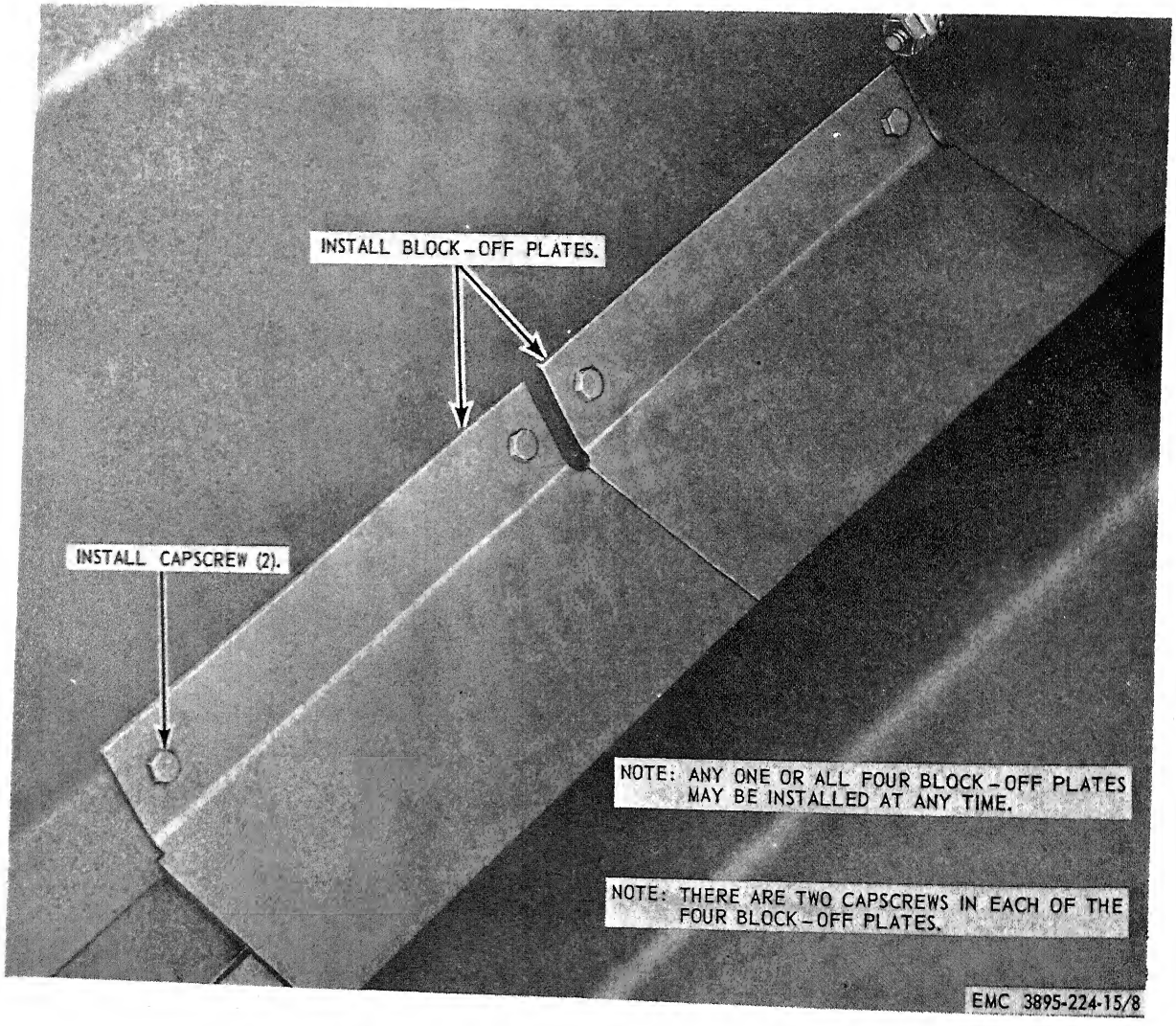


Figure 8. Block-off plates installation and removal.

10. Installation or Setting-Up Instructions

a. Transport Wheels. Remove the transport wheels as follows:

(1) Place the jacks in the loops of the center section and lift the wheels free of the ground.

(2) Remove the wheels as illustrated in figure 9.

(3) Lower spreader until it rests on the traction and support wheel assemblies.

(4) Remove the jacks and place them under the lip at the transmission end of the hopper.

(5) Lift spreader to a height that will allow the center section to be removed after the chains are unhooked (fig. 9).

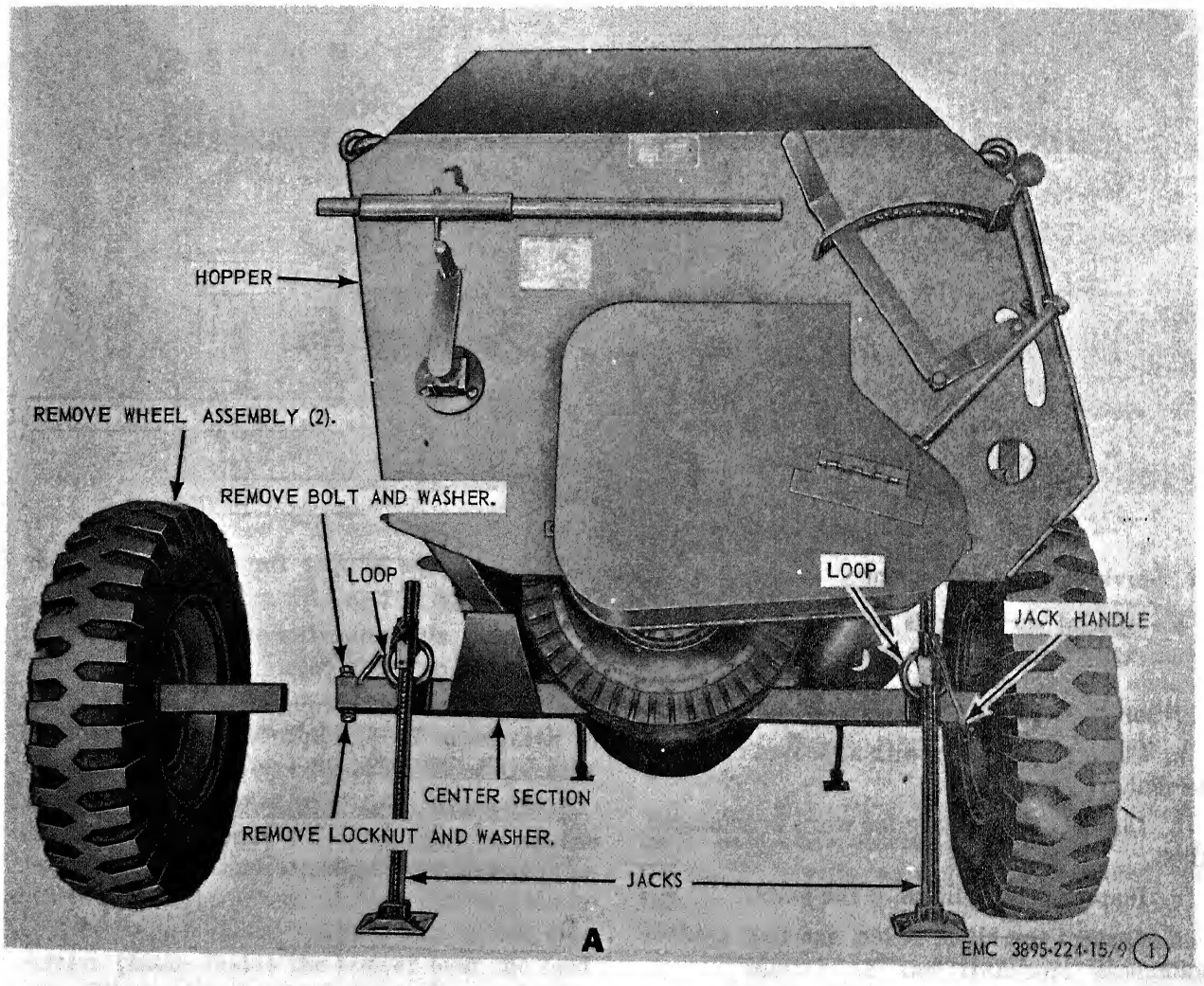
(6) Using the adjusting screw handle lower the spreader hitch enough to allow the chains on the center section of the transport assembly to be unhooked.

(7) Slide the center section clear of the spreader.

(8) Lower and remove the jacks.

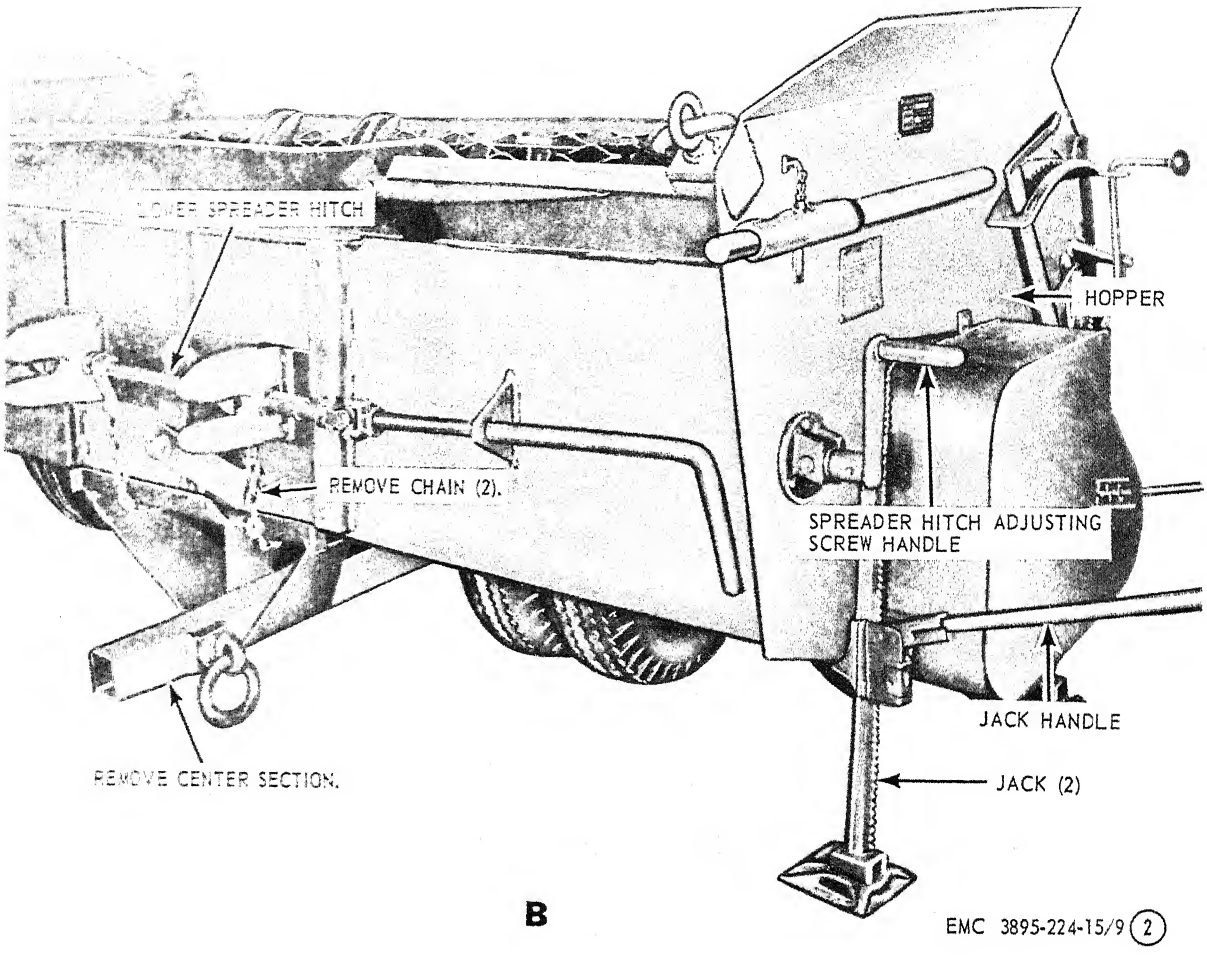
(9) Raise the leveling jacks to the upper position and lock.

b. Transport Tongue. Remove the transport tongue as illustrated in figure 10.



A—Wheels

Figure 9. Transport wheels and center section removal and installation.



B—Center section

Figure 9—Continued.

11. Servicing New Equipment

No special servicing is required to prepare a new aggregate spreader for operation.

12. Servicing Used Equipment

a. Clean the spreader with approved cleaning solvent.

b. Inspect the spreader for worn or damaged tires.

c. Inspect the condition of the paint.

d. Inspect the hitch, roller, and feed control gate.

e. Inspect the hopper for cracks, bends, or other damage.

f. Check all publications for legibility and condition of carrying case.

g. Perform before-operation services listed in paragraph 29 and lubricate in accordance with LO 5–3895–224–15.

h. Prepare spreader for inspection and operation as outlined in DA Form 2258, attached on or near operating controls.

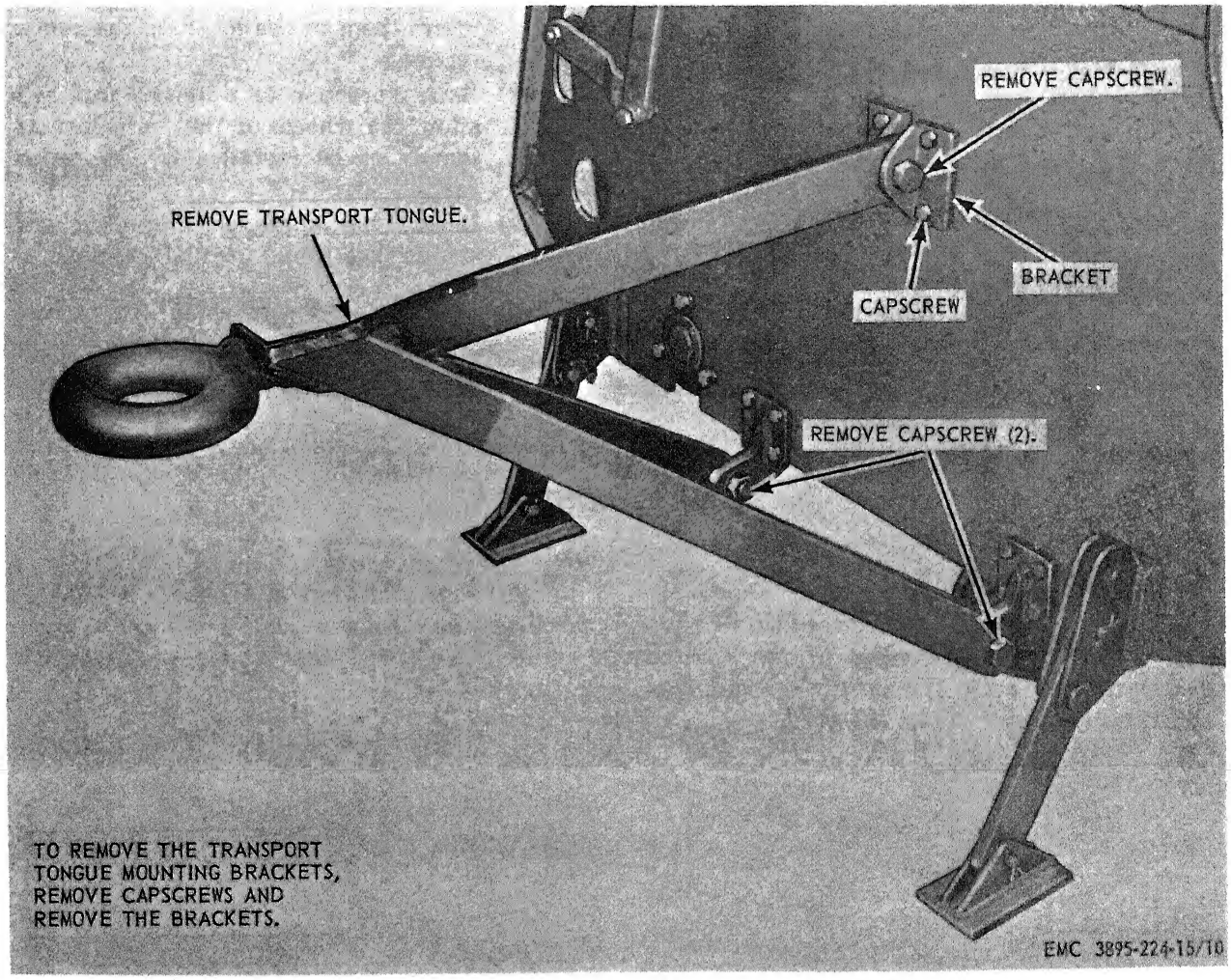


Figure 10. Transport tongue assembly removal and installation.

Section II. MOVEMENT TO A NEW WORK SITE

13. Dismantling For Movement

Depending on distance tc be traveled, the spreader is readied for movement as follows:

a. Short Move. When moving from one job to another in a short move, chain the hopper to both top corners of the truck tailgate. Leave the spreader hitched to the truck and raise the dump body about one-third, then fasten a chain to each corner of the tailgate and to the diaphragm plates, inside the hopper over the feed roll. When the dump body is lowered, the spreader will clear the ground sufficiently to allow travel.

Caution: **If the dump body is raised too high when the spreader is being chained on, excessive pressure on the spreader frame above the hitch will result when the dump body is lowered.**

b. Long Move. The transport wheels assembly is used when moving a long distance. The transport wheels assembly is installed as follows:

(1) Remove the wheels from the center section of the transport assembly (par. 42).

(2) Drop the stands of the spreader (fig. 1) and lock in place.

(3) Insert jacks under the lip of the hopper at the transmission end.

(4) List the spreader to a height that will allow the center section of the transport assembly to slide under the hopper (fig. 9).

(5) Using the adjusting screw handles (fig. 2) lower the spreader hitch to allow the chain to hook. Attach chains to hitch and raise it to tighten the chains.

(6) Lower the spreader resting it on the traction wheel assemblies.

(7) Remove jacks from under hopper and insert them in the loops on the center section.

(8) Raise spreader to a height that will allow the wheels of the transport assembly to be installed in the center section (fig. 9).

(9) Lower the spreader and lock the stands into their original position.

14. Reinstallation After Movement To a New Work Site

For reinstallation after movement refer to paragraph 10.

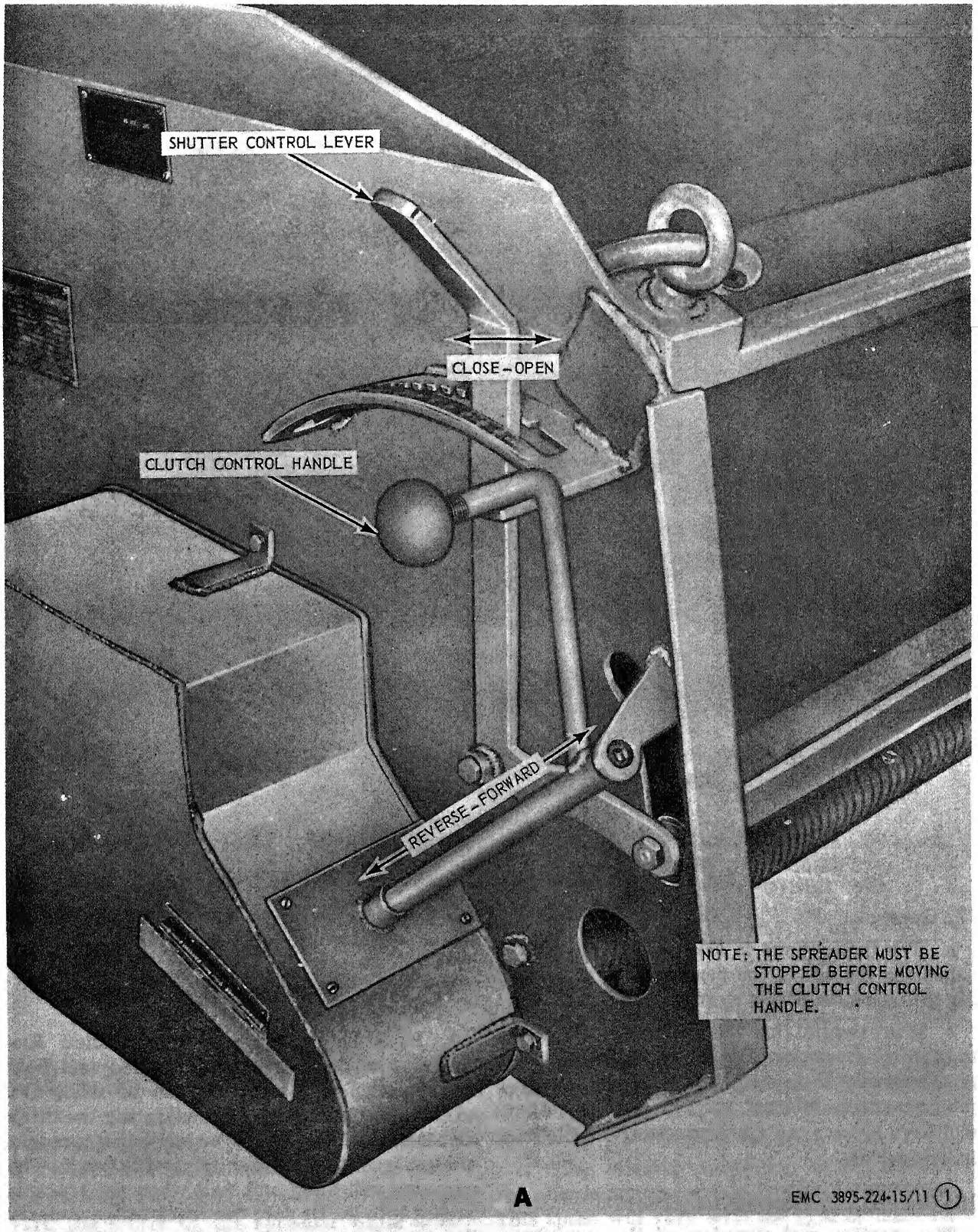
Section III. CONTROLS

15. General

This section describes, locates, illustrates, and furnishes the operator, crew, or driver sufficient information pertaining to the various controls provided for the proper operation of Aggregate Spreader Model M5–8 FT.

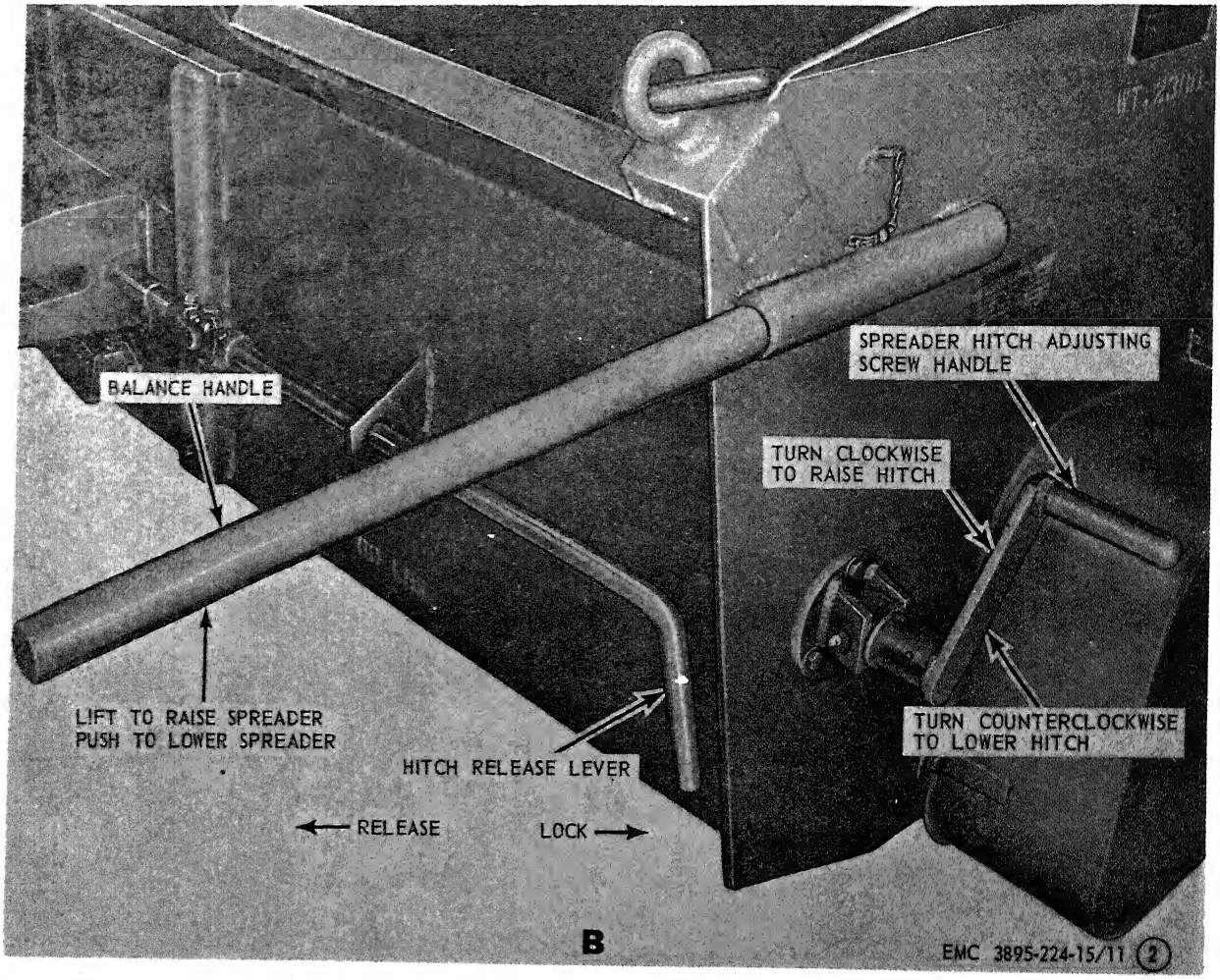
16. Controls

The purpose, location, and use of the controls are illustrated in figure 11.



A—Shutter controls

Figure 11. Controls.



B—Hitch and balance controls

Figure 11—Continued.

Section IV. OPERATION UNDER USUAL CONDITIONS

17. General

a. The instructions in this section are published for the use of the personnel responsible for the operation of the aggregate spreader.

b. It is essential that the operator know how to perform every operation of which the aggregate spreader is capable. Since nearly every job presents a different problem, the operator will have to vary the given procedure to fit the individual job.

18. Starting and Stopping Instructions

The starting and stopping of the spreader is controlled by the driver of the truck towing the spreader. Both the truck and spreader operators must work together for proper operation.

19. Operating Details

a. Back the tow truck to the spreader. Extend the balancing handles (fig. 11) and hold the spreader in a level position by using the adjusting screw handle. By adjusting the hitch adjustment (fig. 11) raise or lower the spreader hitch to meet the towing hitch on the truck. The spreader will hitch and lock when the truck is backed into it. Be sure the truck tailgate clears the spreader so as to permit a smooth flow of material.

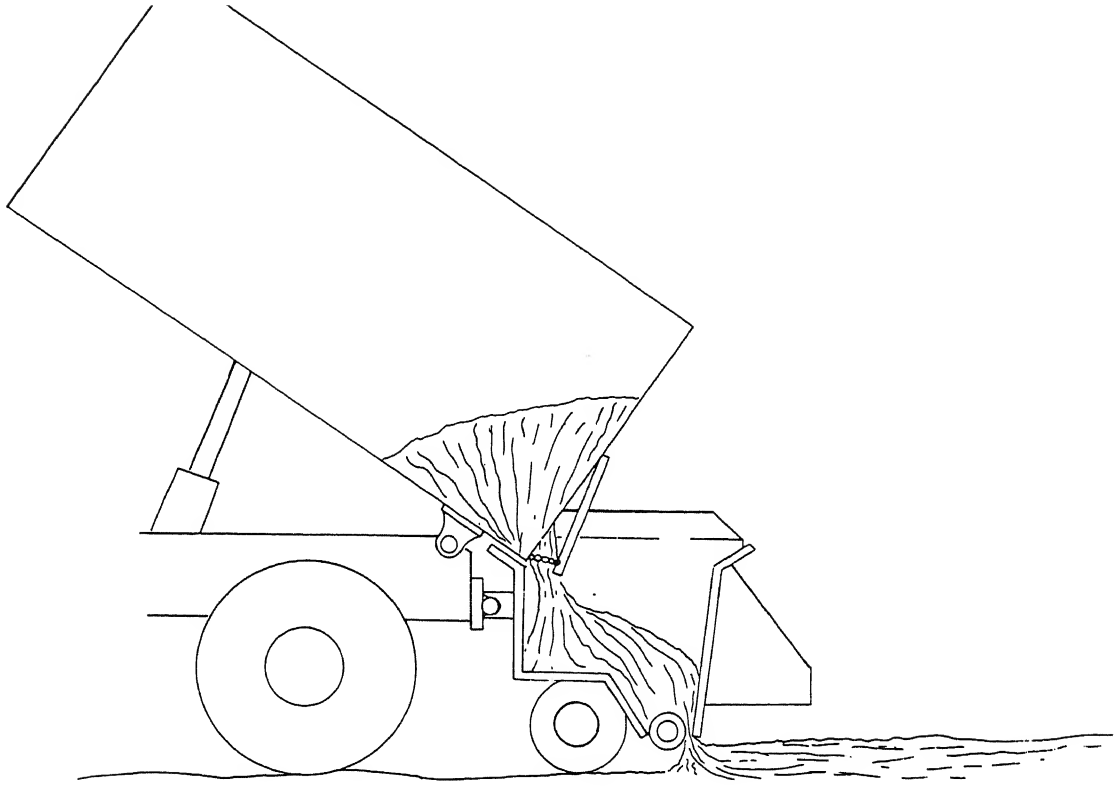


Figure 12. Normal operation of the aggregate spreader.

Note. Make sure both latches lock on the shaft of the towing hitch.

b. Place the shutter control lever (fig. 11) for the desired speed. To operate the spreader in a forward motion, push the reverse mechanism lever (fig. 11) from neutral to IN position toward the center of the spreader while it is stopped. To operate the spreader in a backward motion, stop the spreader and push the clutch from neutral to OUT position away from the center of the spreader.

c. The normal operating speed of the spreader is approximately 3 or 4 miles per hour. This speed will vary with the type of material

being spread, the thickness of spread, and the condition of the area being covered. Once started, a steady speed must be maintained in order to assure an even flow of aggregate. Normal operation of the spreader is illustrated in figure 12.

Section V. OPERATION UNDER UNUSUAL CONDITIONS

20. General

Operation of the spreader where there is excessive moisture or dust creates problems that careful inspection and maintenance can counteract. Use compressed air to clean hard to reach places. Keep the spreader in an enclosure or cover with a tarpaulin when not in use. Be sure to clean all lubrication fittings before applying lubricant. Lubricate sparingly (LO 5–3895–224–15) but frequently.

21. Operation in Salt-Water Areas

The deterioration and corrosion of exposed metal is greatly accelerated in salt-water areas. If the spreader has been operated in or around salt water, clean it thoroughly and lubricate frequently (LO 5–3895–224–15). Paint all exposed surfaces. Coat exposed parts of polished steel or other ferrous metals with rustproofing material or cover parts with a light coat of oil or grease.

22. Fording

After the spreader has been forded across a stream or body of water, clean the spreader thoroughly and allow it to dry. See that the spreader is lubricated (LO 5–3895–224–15) to force the accumulation of water out of the bearing surfaces.

CHAPTER 3
OPERATOR AND ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. OPERATOR AND ORGANIZATIONAL MAINTENANCE TOOLS AND EQUIPMENT

23. Special Tools and Equipment

There are no special tools or equipment required for the maintenance or operation of the aggregate spreader.

24. Basic Issue Tools and Equipment

Tools and repair parts issued with or authorized for the spreader are listed in appendix III.

25. Organizational Maintenance Repair Parts

Organizational maintenance repair parts are listed and illustrated in TM 5–3895–224–25P.

Section II. LUBRICATION

26. General Lubrication Information

a. This section contains a reproduction of the lubrication order and lubrication instructions which are supplemental to, and are not specifically covered in the lubrication order.

b. The lubrication order shown in figure 13 is an exact reproduction of the approved lubrication order for the aggregate spreader. For current lubrication order, always refer to DA Pam 310–4.

27. Detailed Lubrication Information

a. Care of Lubricants. When storing and handling lubricants, make certain containers are clean and securely covered to prevent dirt, dust, or other foreign material from entering. Be sure the lubricant is clean before using it.

b. Cleaning. Clean all surfaces surrounding the point to be lubricated before applying the lubricant. Use a clean cloth dampened in an approved cleaning solvent to clean the surfaces and lubrication fittings before lubricating. Remove all excess lubricant after lubricating.

c. Points of Application. Lubricate the spreader at the points shown in the lubrication order and accompanying illustrations (fig. 13). Do not overlubricate. This is not only wasteful, but it will cause dirt to collect on vital parts and cause undue wear. Apply grease to a fitting until it appears around the part being lubricated, unless otherwise specified. Do not underlubricate since this will cause wear to moving parts.

d. Special Lubrication Instructions for Unusual Conditions. Lubrication intervals will be more frequent when operating the spreader in sand, or in rainy, humid, or salt-water areas.

e. Transport Wheel Bearing.

(1) Remove the wheel bearings (par. 43).
(2) Clean and inspect bearings and seal.
(3) Pack the bearings with proper lubricant (LO 5–3895–224–15) and reassemble and install the transport

LUBRICATION ORDER

LO 5-3895-224-15

SPREADER, AGGREGATE: TOWED; 8 FT SPREAD (GAR WOOD MODEL M5-8 FT)

Reference: SM 10-1-C4-1

Intervals are based on normal hours of operations. Reduce to compensate for abnormal operations and severe conditions. During inactive periods sufficient lubrication must be performed for adequate preservation.

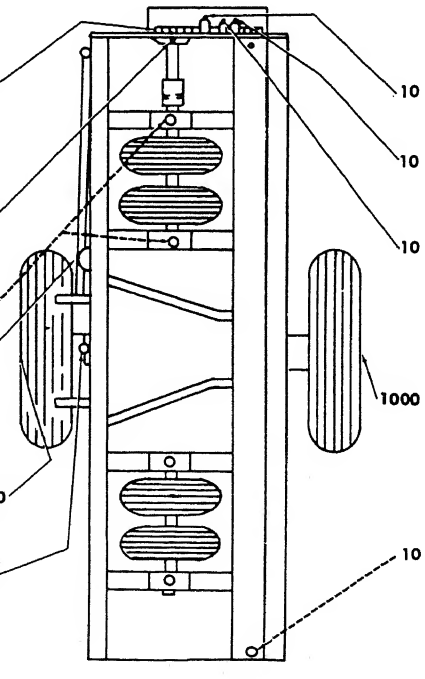
Clean fittings before lubricating.

Relubricate after washing or fording.

Clean parts with SOLVENT, dry-cleaning, or with OIL, fuel, Diesel. Dry before lubricating.

Lubricate points indicated by dotted arrow shafts on both sides of equipment.

LUBRICANT • INTERVAL		INTERVAL • LUBRICANT	
FOLD			FOLD
1 Feed Roll Drive CW-11 Chain (Clean and coat.)	50	10 GAA Adjusting Screw Bearing	7
2 Feed Roll Flanged GAA Bearing	10	10 GAA Ratchet Sprocket Bushing	8
3 Axle Shaft GAA Bearing	10	10 GAA Feed Roll Drive Bearing	9
4 Hitch Trip GAA Universal Joint	10	1000 GAA Transport Wheel Bearing (See note 3.)	10
5 Transport Wheel GAA Bearing (See Note 3.)	1000		
6 Rocker Shaft GAA Bearing	10	10 GAA Feed Roll Bearing	11



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EMC 3895-224-15/13 (1)

1 Front

Figure 13. Lubrication order.

CONTINUED FROM
PRECEDING PAGE

— KEY —

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +32°F	+40°F to -10°F	0°F to -65°F	
OE-OIL, Engine, Heavy Duty		OE 30 or 9250	OE 10 or 9110	OES	Intervals given are in hours of normal operation.
Oil Can Points					
OES-OIL, Engine, Sub-zero					
CW-11-LUBRICATING OIL, Exposed Gear		All Temperatures			
GAA-GREASE, Automotive and Artillery					

NOTES:

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW -10°F. Remove lubricants prescribed in the key for temperatures above -10°F. Clean parts with SOLVENT, dry-cleaning. Relubricate with lubricants specified in the key for temperatures below -10°F.

2. OIL CAN POINTS. Every 50 hours, lubricate pins, clevises, hinges, and all exposed threads with OE.

3. WHEEL BEARINGS. Every 1000 hours, remove wheels; clean, and inspect all parts, replace damaged or worn parts, repack bearings, and reassemble.

Copy of this Lubrication Order will remain with the equipment at all times; instructions contained herein are mandatory.

BY ORDER OF THE SECRETARY OF THE ARMY:

G. H. DECKER,
General, United States Army,
Chief of Staff.

OFFICIAL:

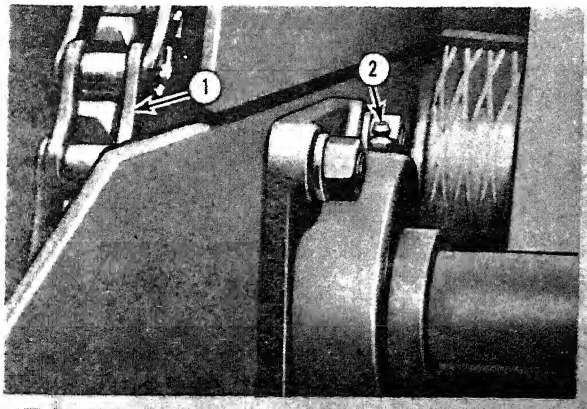
R. V. LEE,
Major General, United States Army,
The Adjutant General.

FOLD FOLD

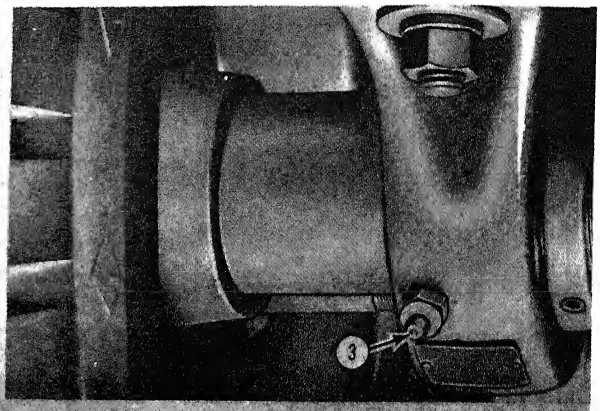
EMC 3895-224-15/13 (2)

2 Back

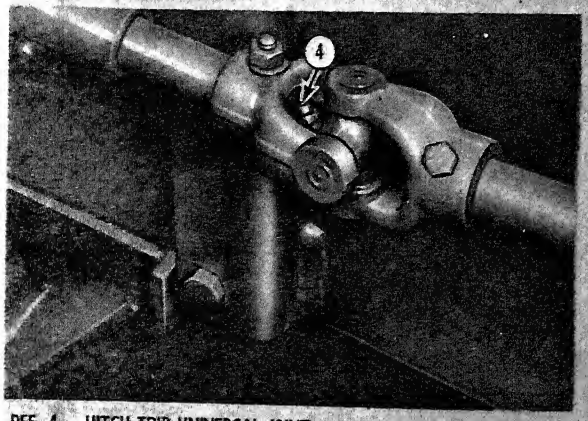
Figure 13—Continued.



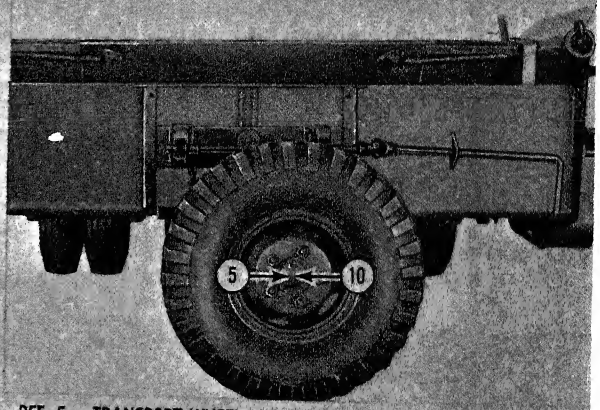
REF. 1 FEED ROLL DRIVE CHAIN
REF. 2 FEED ROLL FLANGED BEARING



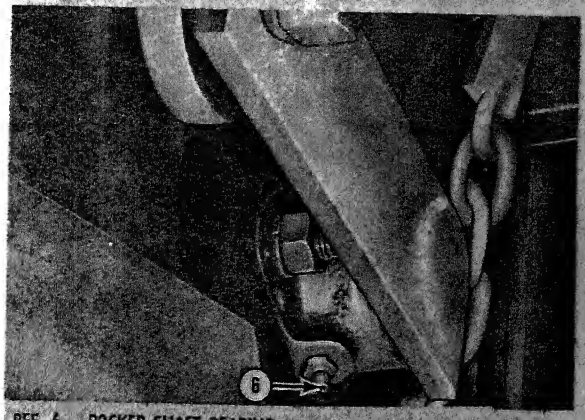
REF. 3 AXLE SHAFT BEARING



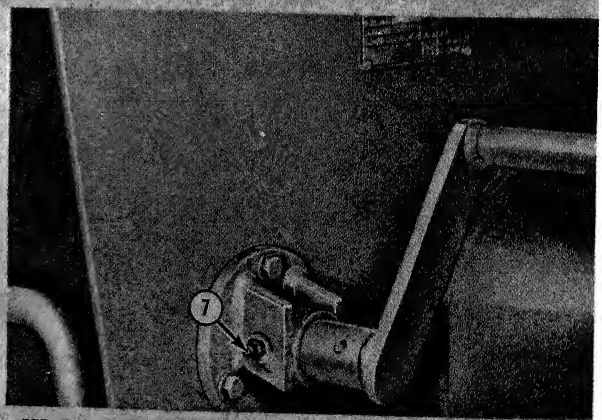
REF. 4 HITCH TRIP UNIVERSAL JOINT



REF. 5 TRANSPORT WHEEL BEARING
REF. 10 TRANSPORT WHEEL BEARING



REF. 6 ROCKER SHAFT BEARING

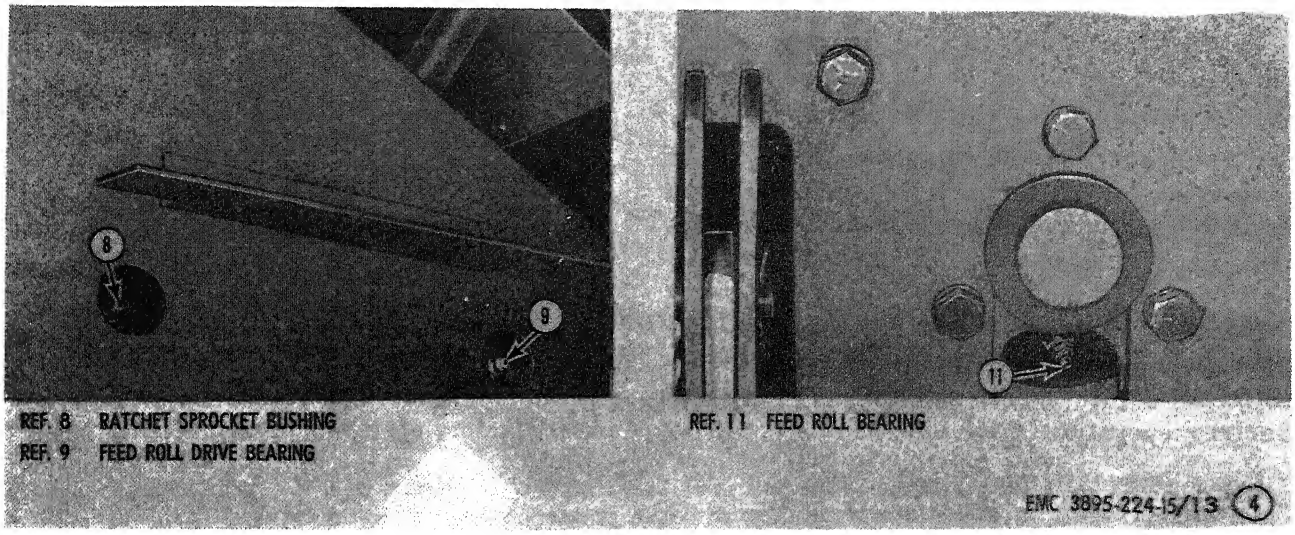


REF. 7 ADJUSTING SCREW BEARING

EMC 3895-224-15/13 (3)

3 References 1 through 10

Figure 13—Continued.



4 References 8, 9, 11

Figure 13—Continued.

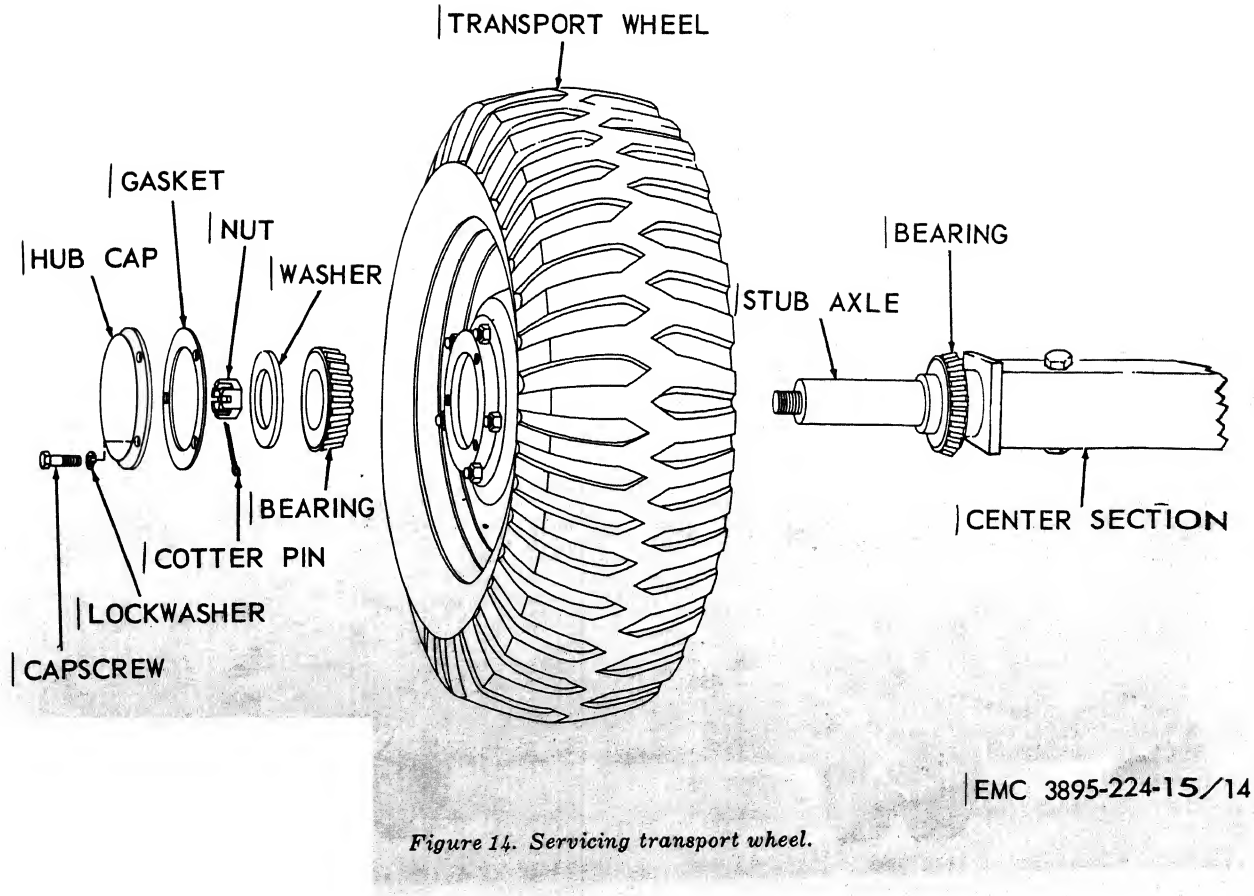


Figure 14. Servicing transport wheel.

Section III. PREVENTIVE MAINTENANCE SERVICES

28. General

To insure that the equipment is ready for operation at all times, it must be inspected systematically before operation, during operation, and after operation, so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance services will be performed before operation. Defects discovered during operation of the unit will be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noticed during operation which would damage the equipment if operation were continued. After-operation services will be performed by the operator after every operating period. After-operation services will be performed at intervals based on the normal operations of the equipment. Reduce interval to compensate for abnormal conditions. Defects or unsatisfactory operating characteristics beyond

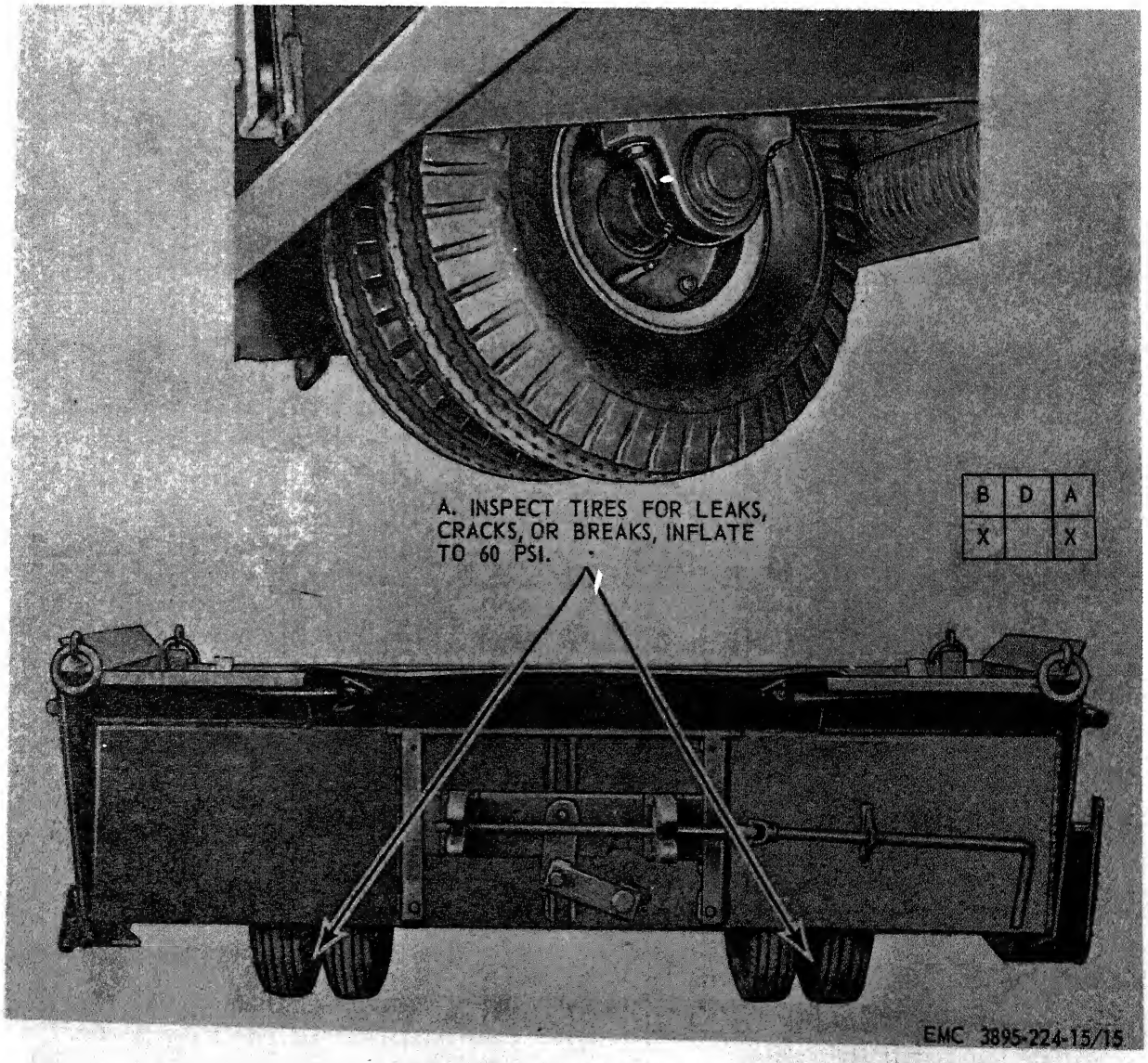


Figure 15. Operator's daily services.

the scope of the operator to correct must be reported at the earliest opportunity to organizational maintenance. Responsibility for performance of preventive maintenance service rests not only with the operator, but with the entire chain of command from section chief to commanding officer (AR 750–5).

29. Operator's Daily Services

a. General. The intervals at which specific daily services are to be performed by the operator or crew are indicated by an X in the appropriate column in figure 15 as follows:

B—Before operation
D—During operation
A—After operation

b. Additional Daily Services (Not Illustrated). An X in the appropriate columns indicates the interval at which the service is to be performed.

Intervals			Procedure
B	D	A	
X		X	*Visual inspection.* Make a visual inspection of the aggregate spreader. Check for loose, missing, or damaged parts. Correct deficiencies noticed, or report the condition to organizational maintenance.
X			*Tampering.* Check to see if the aggregate spreader has been tampered with or damaged. Do not operate the equipment until all deficiencies noticed are repaired or corrected.
		X	*Publications.* See that a copy of this manual, TM 5–3895–224–15, and the current lubrication order are with the equipment and in ligible condition.
X		X	*Controls.* Check to see that all controls are in good operating condition.
	X		*Unusual noise or operation.* Check for unusual noise or operation, such as a chain slapping or rasping, sprocket noise, or loud clanking noise. When further damage to the spreader could result, stop the unit and do not resume operation until the deficiency is corrected. Correct the deficiency noticed or report the condition to organizational maintenance.
X		X	*Tools and equipment.* See that all tools and equipment assigned to the spreader are in serviceable condition and are properly cleaned and placed.
X			*Lubrication.* Check to see that the equipment has been completely lubricated. Do not operate the spreader until the detailed lubrication has been performed (LO 5–3895–224–15).

30. Organizational Maintenance

a. Preventive maintenance is performed by organizational maintenance personnel at quarterly intervals. A quarterly interval is equivalent to 3 calendar months, or 250 hours of operation, whichever occurs first.

b. The preventive maintenance services to be performed at quarterly intervals are listed consecutively (starting with No. 1) and are described in paragraph 31. The number opposite each service refers to a preventive maintenance service "Title" on DA Form 464 and indicates the services to be performed. The number listed under "Inspection" indicates the minimum inspection requirements for the equipment.

31. Quarterly Preventive Maintenance Services

Service	
Inspection	Quarterly
1	1
2	2

GENERAL

Before-operation services. Check and perform services listed in daily before-operation services.

Lubrication. Check the aggregate spreader for signs of improper or inadequate lubrication.

Service	
Inspection	Quarterly
	GENERAL
	2
3	3
	3
4	4
5	5
	5
6	6
7	7
	7
8	8
	8
9	9
	9
10	10
	10
11	11
	11
12	12
	12
13	13
	13
14	14
	14
15	15
	15
16	16
	16
17	17
	17
18	18
	18

GENERAL

Replace all missing or damaged fittings. Lubricate the spreader as specified in LO 5–3895–224–15.

Tools and equipment. Inspect the condition of the tools and equipment.

See that the tools and equipment assigned to the spreader are clean, serviceable, and properly stowed or mounted.

Publications. See that a copy of TM 5–3895–224–15, current lubrication order, and standard form 91, or DA Form 285 are on or with the equipment and in serviceable condition.

Appearance. Inspect the general appearance of the spreader, paying particular attention to the ligibility of instruction and data plates and cleaness of the unit. Also the condition of the paint.

Correct any deficiencies noticed or report to field maintenance.

Modification. See that all modification work orders applying to the aggregate spreader have been completed and recorded on DA Form 478, DA Form 5–73, and DA Form 5–73A as applicable.

Levers and linkage. Check all levers and linkage for proper operation (par. 54).

Repair or report any deficiencies noticed to field maintenance, 3d echelon.

Bearings and shafts. Inspect the bearings and shaft on the roller. Make sure that the bearings turn easily and the shaft is not bent (par. 58).

Repair all deficiencies or report to field maintenance 3d echelon.

Frame. Check the hopper for cracks, breaks, or broken welds (par. 83).

Report any major deficiencies to field maintenance, 3d echelon.

Wheels. Check the wheels of the transport axle assembly for cracks, breaks, bends (par. 44). Repair any deficiencies noticed.

Inspect the traction wheel assemblies for cracks, breaks, and bends (par. 60). Check for separation of the two rims. Repair any deficiencies or report to field maintenance, 3d echelon.

Operating clutch. Check the jaw type clutch to insure that it engages the forward and reverse sprockets properly (par. 57).

Repair any deficiencies noticed.

Tires. Inspect the traction tires for cracks or breaks and correct tire pressure (par. 4).

Check the transport tires for cracks or breaks and correct tire pressure (par. 4).

Truck hitch. Inspect the tow hitch for breaks, damaged hardware or connections (par. 47).

Repair or report deficiencies to field maintenance, 3d echelon.

Trailer stands. Inspect trailer stands for damaged feet or connecting hardware (par. 41).

Repair or report deficiencies to field maintenance, 3d echelon.

Catwalk. Inspect catwalk for bent, broken, or cracked parts. Inspect for damaged or loose hardware (par. 51).

Repair or report deficiencies to field maintenance, 3d echelon.

Mounting bracket assembly. Inspect mounting bracket for damaged hardware. Inspect for cracked or broken parts.

Repair or report deficiencies to field maintenance, 3d echelon.

Jack assembly. Inspect jack assembly for damaged jack, jack stands, or jack handle.

Repair or report deficiencies to field maintenance, 3d echelon.

Chain drive transmission. Inspect the sprockets in the chain drive transmission for chipped or cracked teeth (par. 57).

Inspect the chain for cracked or broken links. Replace defective chain (par. 57)

Section IV. TROUBLESHOOTING

32. General

This section provides information useful in diagnosing and correcting unsatisfactory operation or failure of the aggregate spreader and its components. Each trouble symptom stated is followed

by a list of probable causes of the trouble. The possible remedy recommended is described opposite the probable cause. Any operational trouble that is beyond the scope of organizational maintenance must be reported to field maintenance, 3d echelon.

33. Roller Does Not Operate

Probable cause	*Possible Remedy*
Chain broken	Replace chain (par. 57).
Chain off sprocket	Install chain (par. 57).
Chain broken on traction drive axle	Replace chain (par. 62).
Chain drive transmission clutch broken	Replace or repair clutch (par. 57).

34. Towing Hitch Does Not Latch

Probable cause	*Possible Remedy*
Broken tension spring	Replace tension spring (par. 47).
Bent or broken hitch	Repair or replace the hitch (par. 47).

35. Traction Wheels Binding

Probable cause	*Possible Remedy*
Bearings stuck	Replace bearings (par. 60).
Chain in chain drive transmission improperly adjusted	Adjust chain (par. 57).

36. Support Wheels Binding

Probable cause	*Possible Remedy*
Bearing not turning freely	Replace pillow blocks (par. 60).

37. Shutter Does Not Close Fully

Probable cause	*Possible Remedy*
Foreign matter holding shutter	Clean out shutter opening.
Shutter bent or broken	Repair or replace shutter (par. 55).

38. Chain Not Contacting Sprockets Properly

Probable cause	*Possible Remedy*
Chain improperly adjusted	Adjust chain (par. 57).
Sprocket teeth broken	Replace sprocket (par. 57).

39. Field Expedient Repairs

Trouble	*Expedient remedy*
Traction tire flat	Complete the run, to empty the load, on three tires.
Shutter control lever broken	Block the shutter open or closed with a short piece of wood.

Section V. TRANSPORT WHEEL STANDS AND LEVELING JACK ASSEMBLIES

40. Jack Assembly

a. General. The leveling jack assemblies are for use during removal of the transport wheels and for leveling the spreader for installation on a truck.

b. Removal. Remove the jacks (A, fig. 9) by releasing tension on the loops.

c. Cleaning and Inspection. Clean and inspect all parts with an approved cleaning solvent and dry thoroughly. Inspect for breaks or wear. Repair or replace all damaged parts.

d. Installation. Replace the jacks by placing in position and raising until tension is placed on the loops.

41. Stand Assembly

a. General. The stands are used to support the spreader while the transport wheels are being installed.

b. Removal. Remove the stands (fig. 1) by removing two cotter pins, two pins, and the chain. The stands can then be lifted out.

c. Cleaning and Inspection. Clean all parts

with an approved cleaning solvent and dry thoroughly. Inspect for breaks or wear. Repair or replace all damaged parts.

d. Installation. Position the stands and secure with the chain, pins, and cotter pins.

42. Transport Wheel and Tire Assembly

a. General. The transport wheels are used for transporting the spreader from one location to another.

b. Removal. Remove the transport wheel and tire assembly as instruced in figure 16.

c. Cleaning, Inspection, and Repair. Clean all parts with an approved cleaning solvent and dry thoroughly. Repair or replace all defective parts.

d. Installation. Install the transport wheel as illustrated in figure 16.

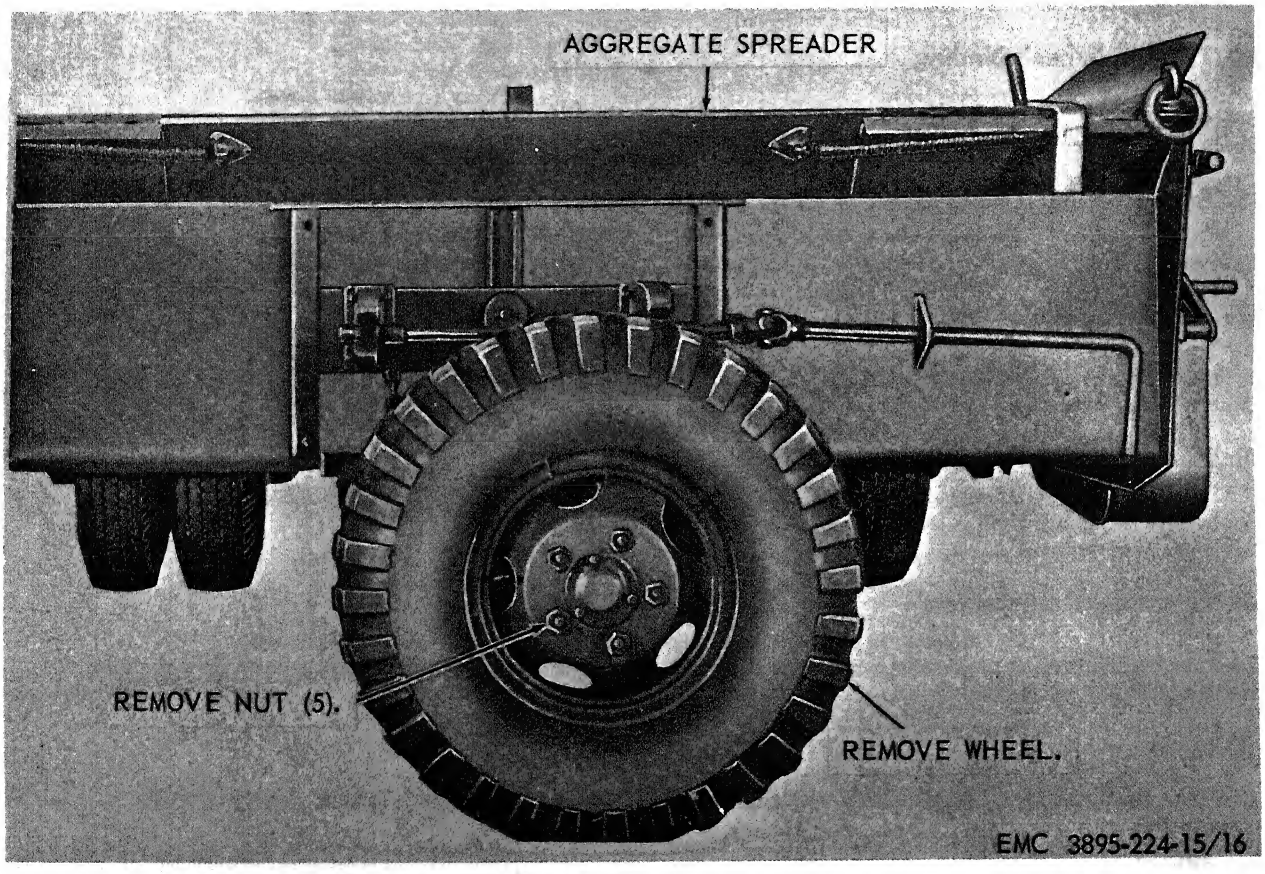


Figure 16. Transport wheel and tire assembly removal and installation.

Section VI. TRANSPORT WHEEL HUB AND AXLE ASSEMBLY

43. General

The transport wheel hub and axle assembly consists of the wheel hub mounted to the axle assembly with tapered roller bearings, nut, and cover. The axle assembly is mounted to the hopper.

44. Transport Wheel Hub and Axle Assembly

a. Removal. Remove the transport wheel and axle assembly as instructed in figure 17.

b. Disassembly. Disassemble the transport wheel hub and axle assembly as illustrated in figure 18.

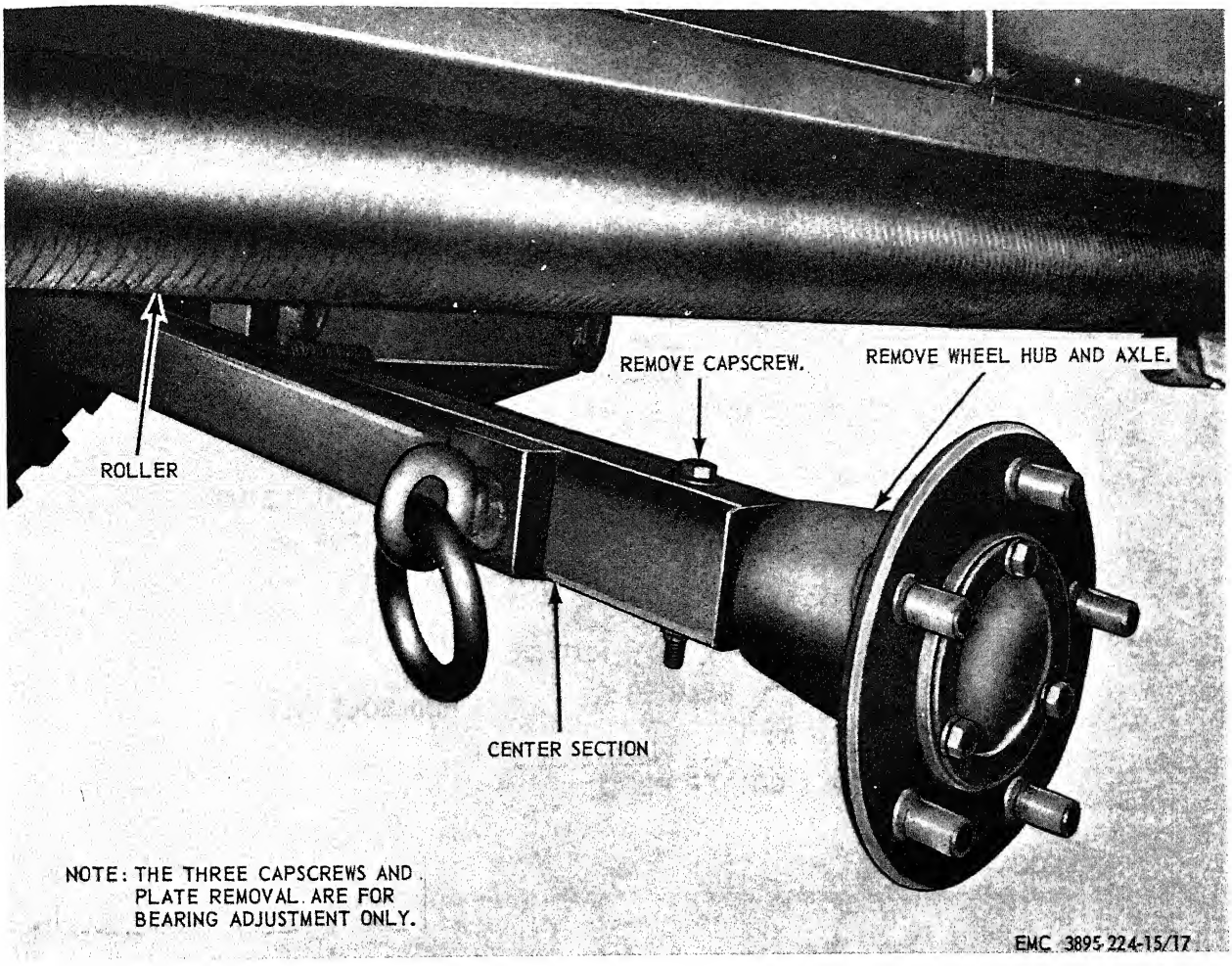


Figure 17. Transport wheel hub and axle assembly removal and installation.

c. Cleaning, Inspection, and Repair. Clean all parts in an approved cleaning solvent and dry thoroughly. Repair or replace all defective parts.

d. Adjustments.

(1) Remove three capscrews and bearing cover plate as illustrated in figure 17.

(2) Remove cotter pin from bearing adjusting nut.

(3) Turn adjusting nut clockwise to increase pressure and counterclockwise to decrease pressure.

(4) Replace three capscrews and cover plate.

e. Reassembly. Reassemble the transport wheel and axle assembly as illustrated in figure 18.

f. Installation. Install the transport wheel and axle assembly as illustrated in figure 17.

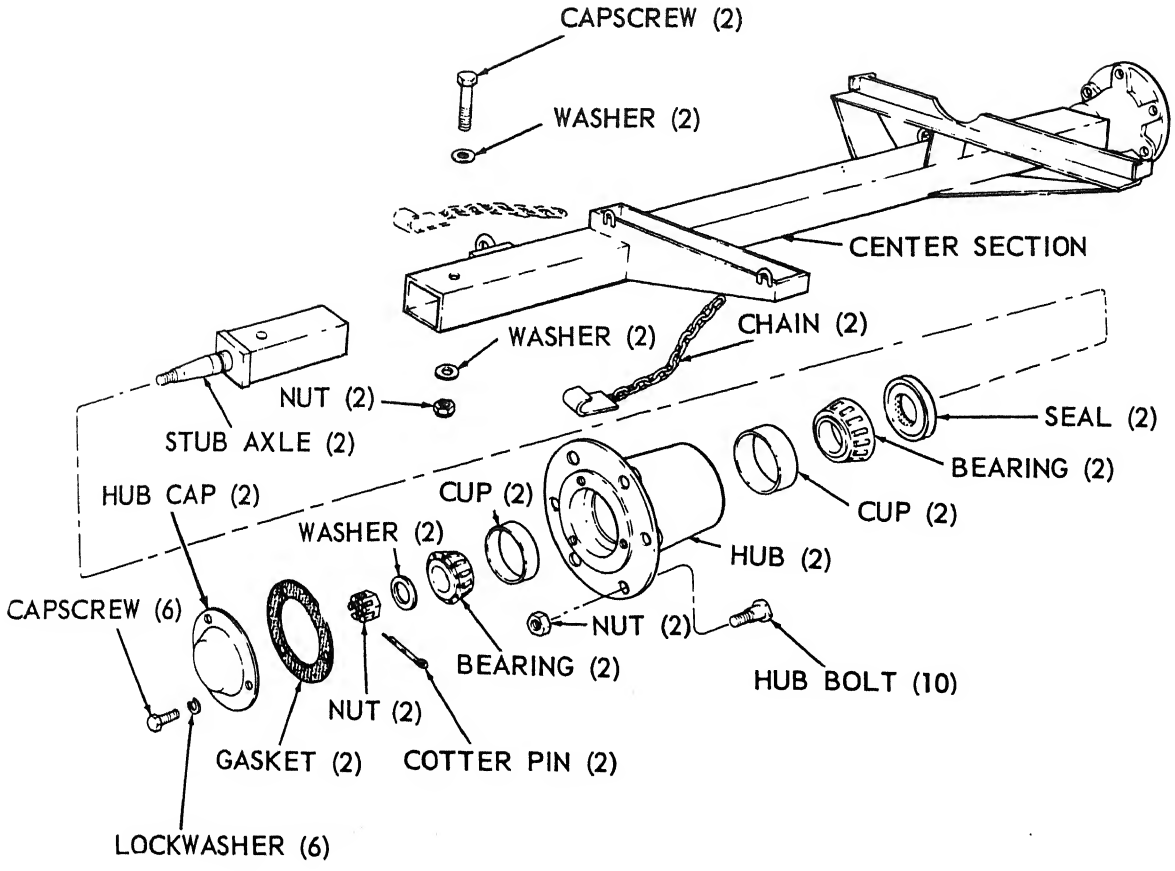


Figure 18. Transport wheel hub and axle assembly, disassembly and reassembly, exploded view.

Section VII. TRANSPORT TONGUE, TRUCK HITCH, AND SPREADER HITCH ASSEMBLIES

45. General

The transport tongue is used to tow the spreader from one work site to another and the truck and spreader hitches are used when the spreader is in normal working position on the rear of a dump truck. The spreader hitch is a welded frame with spring-loaded latches. When the truck hitch is backed into it, the spreader hitch locks both together. A hitch release lever actuates a hub inside the spreader hitch relieving the spring tension and frees the truck hitch. The spreader hitch is adjustable as to height by the use of an adjusting screw handle which protrudes through the end of the hopper assembly.

46. Transport Tongue Assembly

a. Removal. For removal of the transport tongue refer to paragraph 10.

b. Disassembly. Disassemble the transport tongue as illustrated in figure 19.

c. Cleaning, Inspection, and Repair. Clean all parts with an approved cleaning solvent and dry thoroughly. Inspect all threads. Replace or repair all damaged parts.

d. Reassembly. Reassemble the transport tongue as illustrated in figure 19.

e. Installation. Install the transport tongue as illustrated in figure 10.

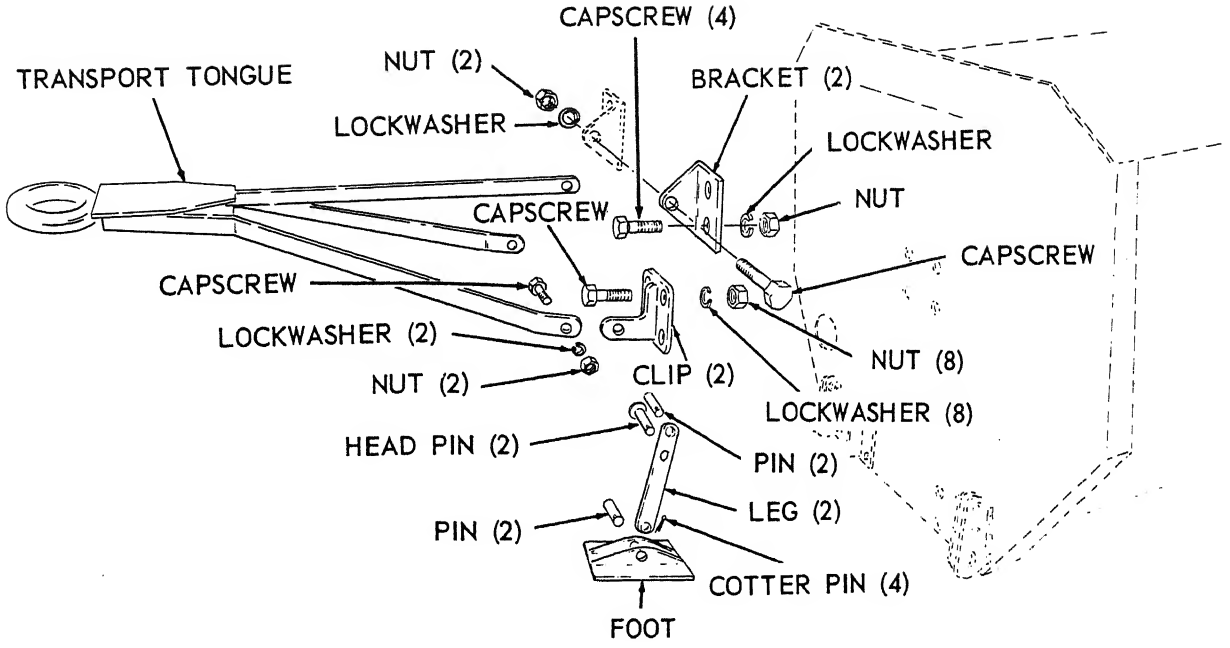


Figure 19. Transport tongue and stand assemblies, disassembly and reassembly, exploded view.

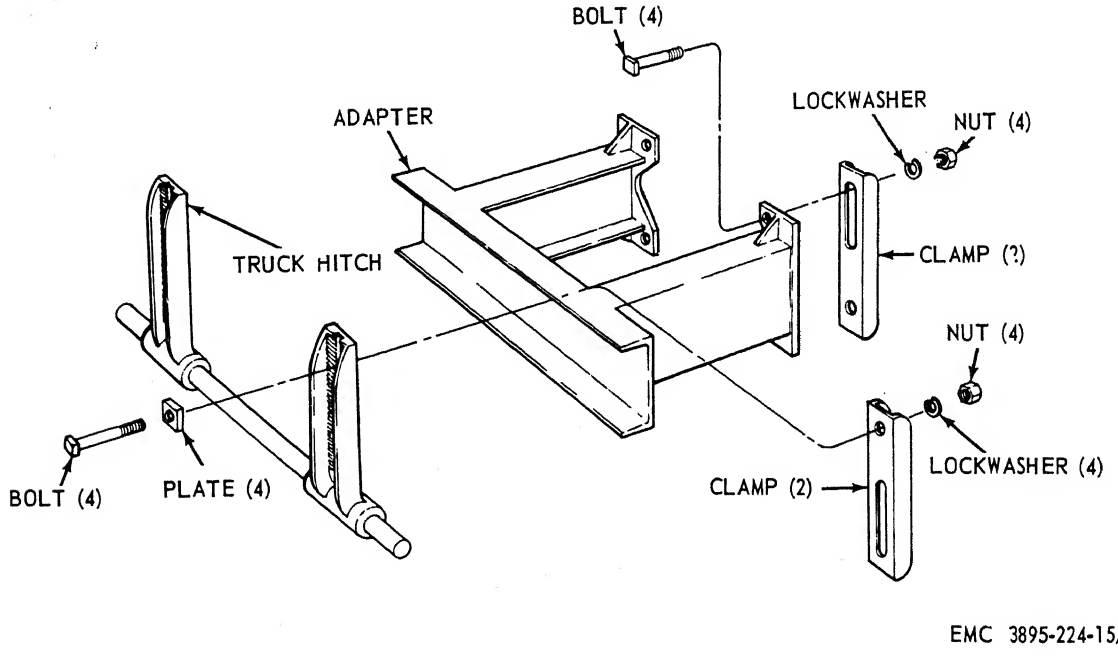
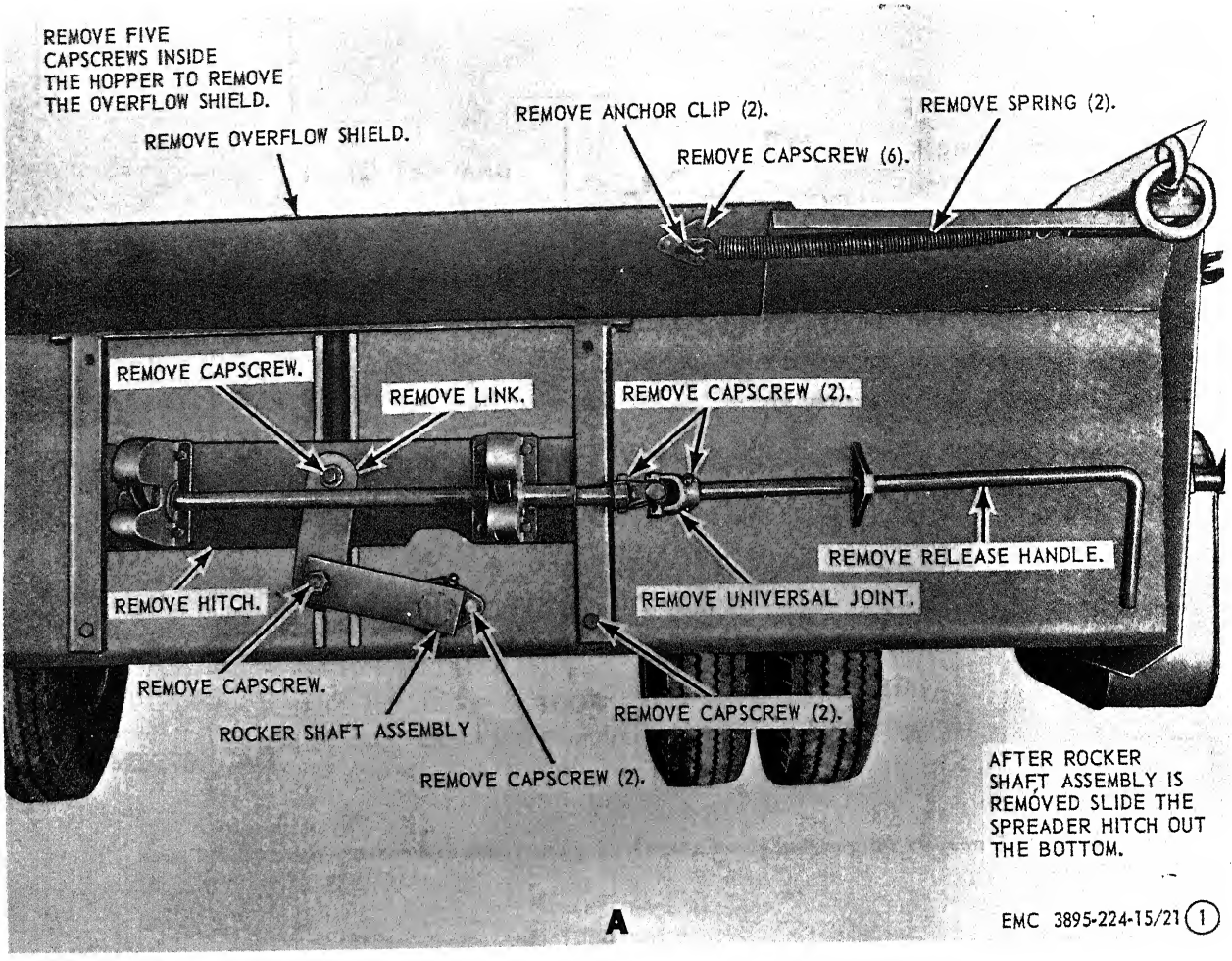


Figure 20. Truck hitch assembly, disassembly and reassembly, exploded view.



A—Spreader hitch

Figure 21. Spreader hitch assembly and overflow shield removal and installation.

47. Truck Hitch Assembly

a. Removal and Disassembly. For removal and disassemble of the truck hitch refer to figure 20.

b. Cleaning, Inspection, and Repair. Clean all parts with an approved cleaning solvent and dry thoroughly. Inspect all threads. Replace or repair all damaged parts.

c. Reassembly and Installation. Reassemble and install the truck hitch as illustrated in figure 20.

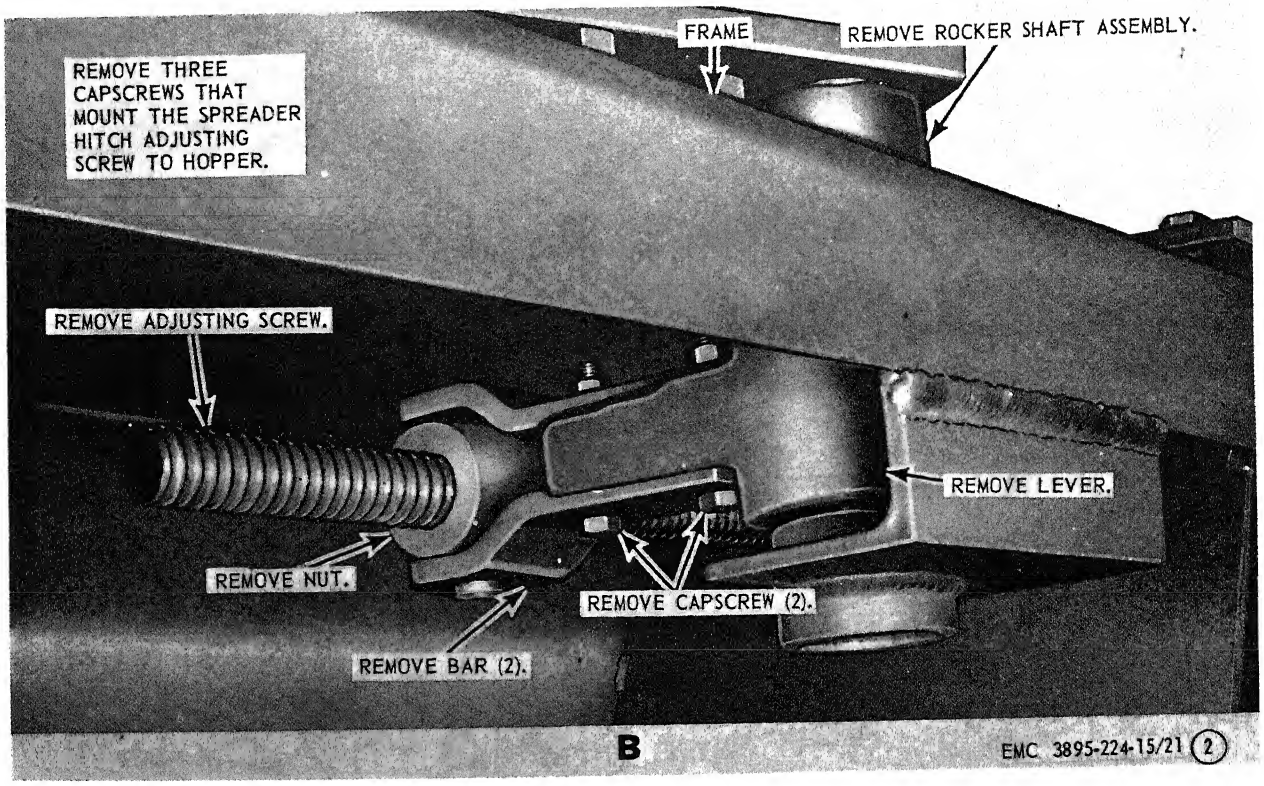
48. Spreader Hitch Assembly

a. Removal. Remove the spreader hitch as illustrated in figure 21.

b. Disassembly. Disassemble the spreader hitch as illustrated in figure 22.

c. Cleaning, Inspection, and Repair. Clean all parts in an approved cleaning solvent and dry thoroughly. Inspect all threads. Repair or replace all damaged parts.

d. Reassembly. Reassemble the spreader hitch as illustrated in figure 22.



B—Adjusting screw

Figure 21—Continued.

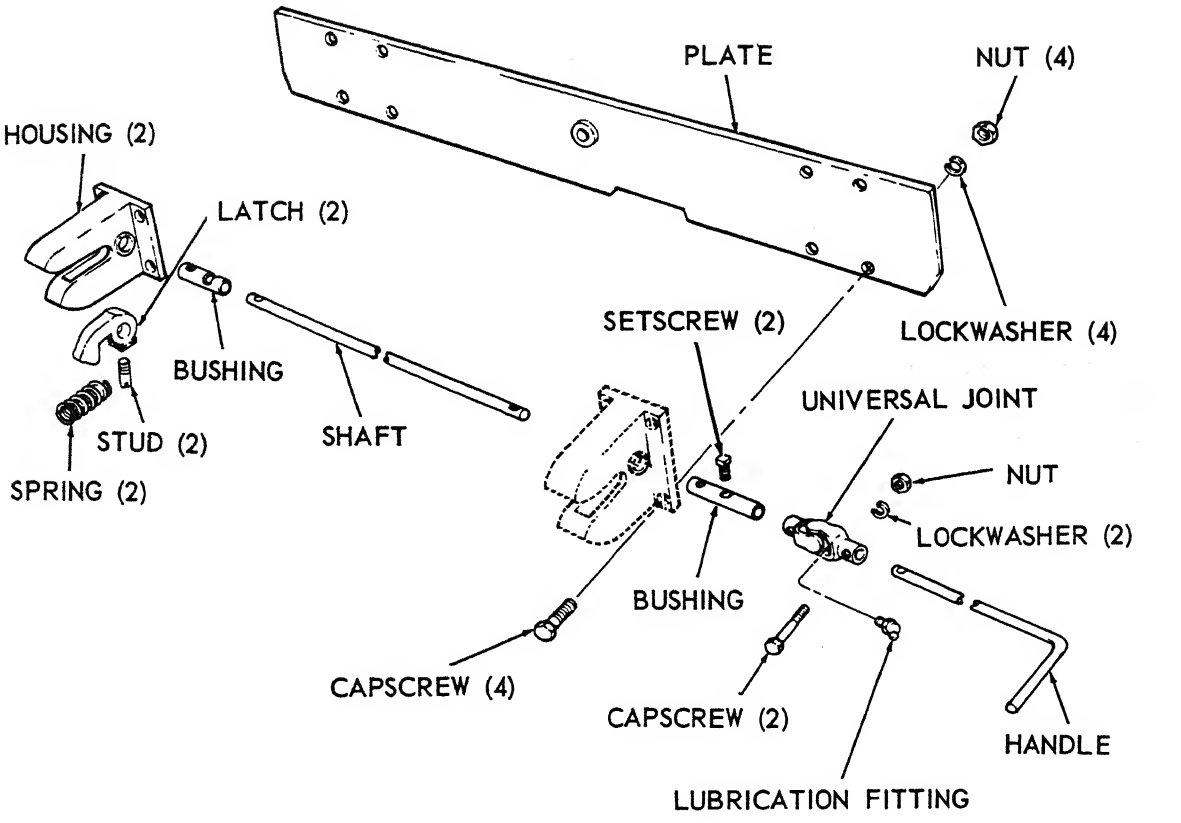
e. Installation. Install the spreader hitch as illustrated in figure 21.

49. Overflow Shield

a. Removal. Remove the overflow shield as instructed in figure 21.

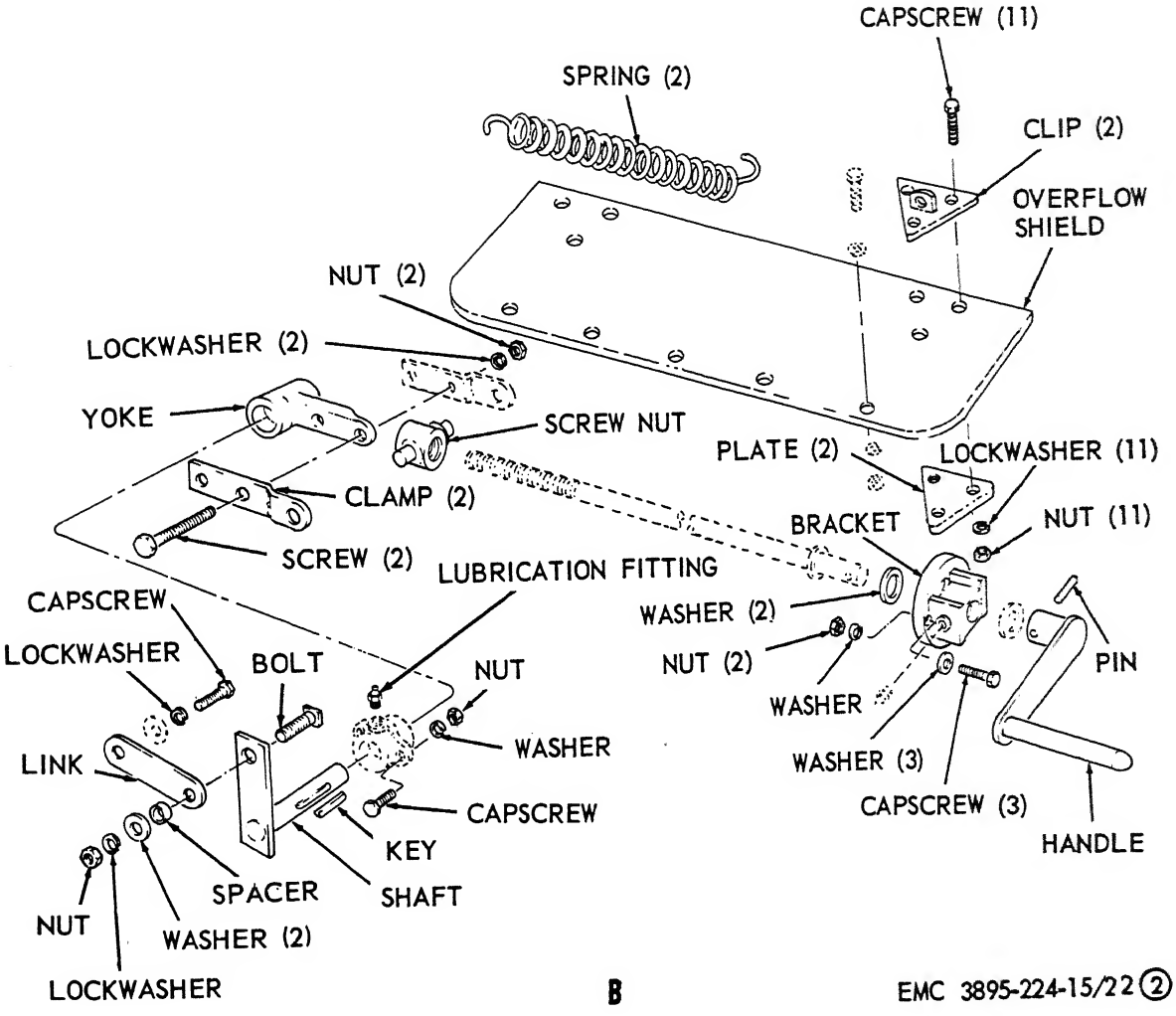
b. Cleaning, Inspection, and Repair. Clean all parts in an approved cleaning solvent and dry thoroughly. Inspect for cracks, breaks, and other damage. Repair or replace as necessary.

c. Installation. Install the overflow shield as illustrated in figure 21.



A—Spreader hitch

Figure 22. Spreader hitch assembly and overflow shield, disassembly and reassembly, exploded view.



B—Adjusting screw

Figure 22—Continued.

Section VIII. OPERATOR'S PLATFORM AND BLOCK-OFF PLATES

50. General

The operator's platform hangs on the rear of the spreader when in operating position, permitting the operator to move from one end of the spreader to the other in order to operate the controls. The block-off plates, if used, limit the width of spread. The plates control width of spread at 4 feet to 8 feet, in one-foot variations.

51. Operator's Platform

a. Removal. For removal of the operator's platform refer to figure 7.

b. Cleaning, Inspection, and Repair. Clean all parts in an approved cleaning solvent and dry thoroughly. Inspect for cracks or broken welds. Repair, replace or weld all damaged parts.

c. Installation. To install the operator's platform refer to figure 7.

52. Block-Off Plates

a. Removal. Remove the block-off plates as illustrated in figure 8.

b. Cleaning, Inspection, and Repair. Clean all parts in an approved cleaning solvent and dry thoroughly. Inspect all mounting hardware for damaged threads. Repair or replace all damaged parts.

c. Installation. Install the block-off plates as illustrated in figure 8.

Section IX. SHUTTER AND SHUTTER CONTROL ASSEMBLY

53. General

The shutter and shutter control assembly consists of the shutter and the shutter control levers. Identical controls are located on each end of the hopper assembly. They operate independently of each other to supply a tapered spread of aggregate, if so desired. The degree of opening of the shutter is registered by the use of the scale marked on each lever bracket.

54. Shutter Control Assembly

a. Removal. Remove the shutter control assembly as illustrated in figure 23.

b. Disassembly. Disassemble the shutter control assembly (par. 55).

c. Cleaning, Inspection, and Repair. Clean all parts with an approved cleaning solvent and dry thoroughly. Inspect all parts for any dam-

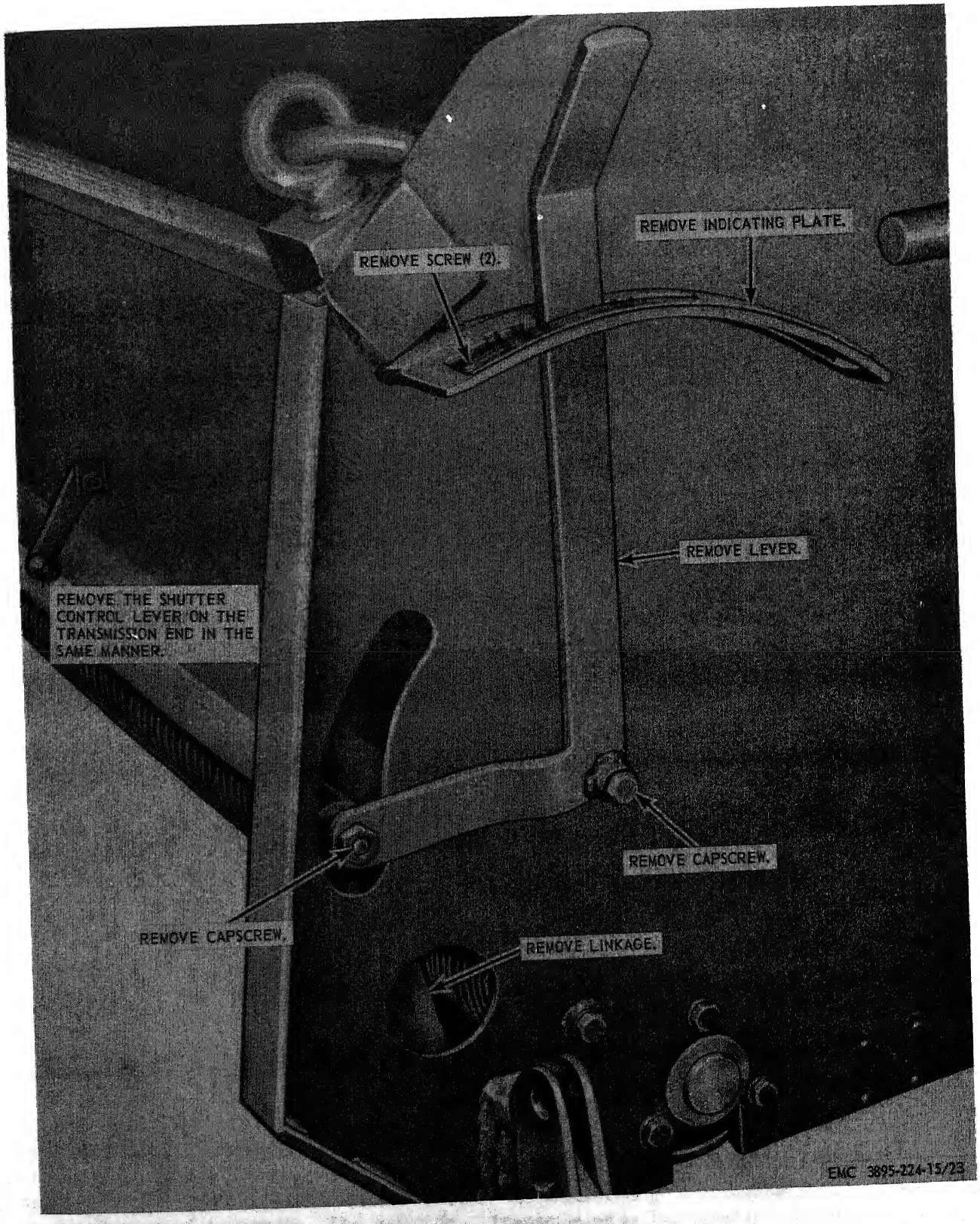


Figure 23. Shutter control assembly removal and installation.

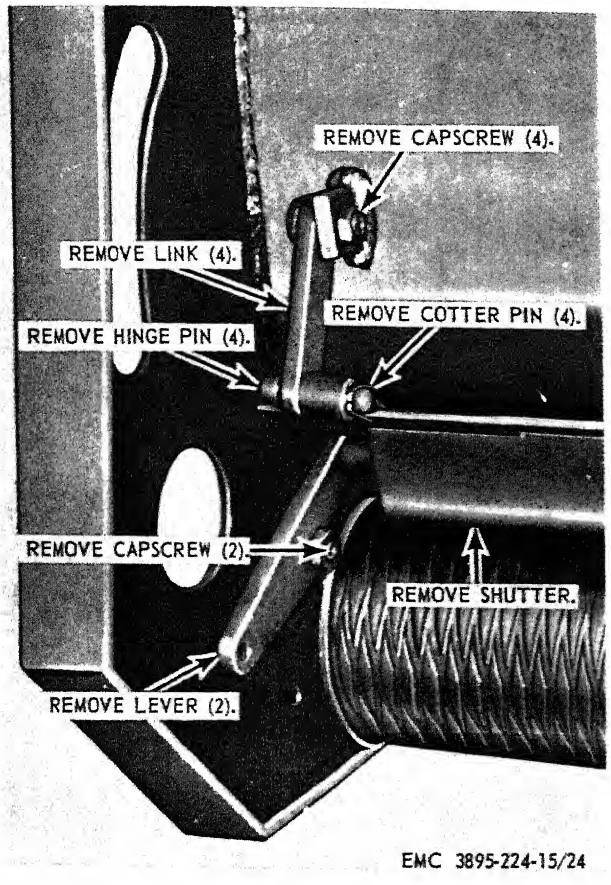


Figure 24. Shutter removal and installation.

age, such as cracks, breaks or bends. Repair or replace all damaged parts.

d. Reassembly. Reassemble the shutter control as illustrated in figure 24.

e. Installation. Install the shutter controls as illustrated in figure 23.

55. Shutter

a. Removal.

(1) Remove the shutter controls (par. 54).

(2) Remove the shutter as illustrated in figure 24.

b. Disassembly. Disassemble the shutter as illustrated in figure 25.

c. Cleaning, Inspection, and Repair. Clean all parts in an approved cleaning solvent and dry thoroughly. Inspect all parts for damage, such as cracks, bends, or breaks. Replace or repair all damaged parts.

d. Reassembly. Reassemble the shutter as illustrated in figure 25.

e. Installation. Install the shutter as illustrated in figure 24.

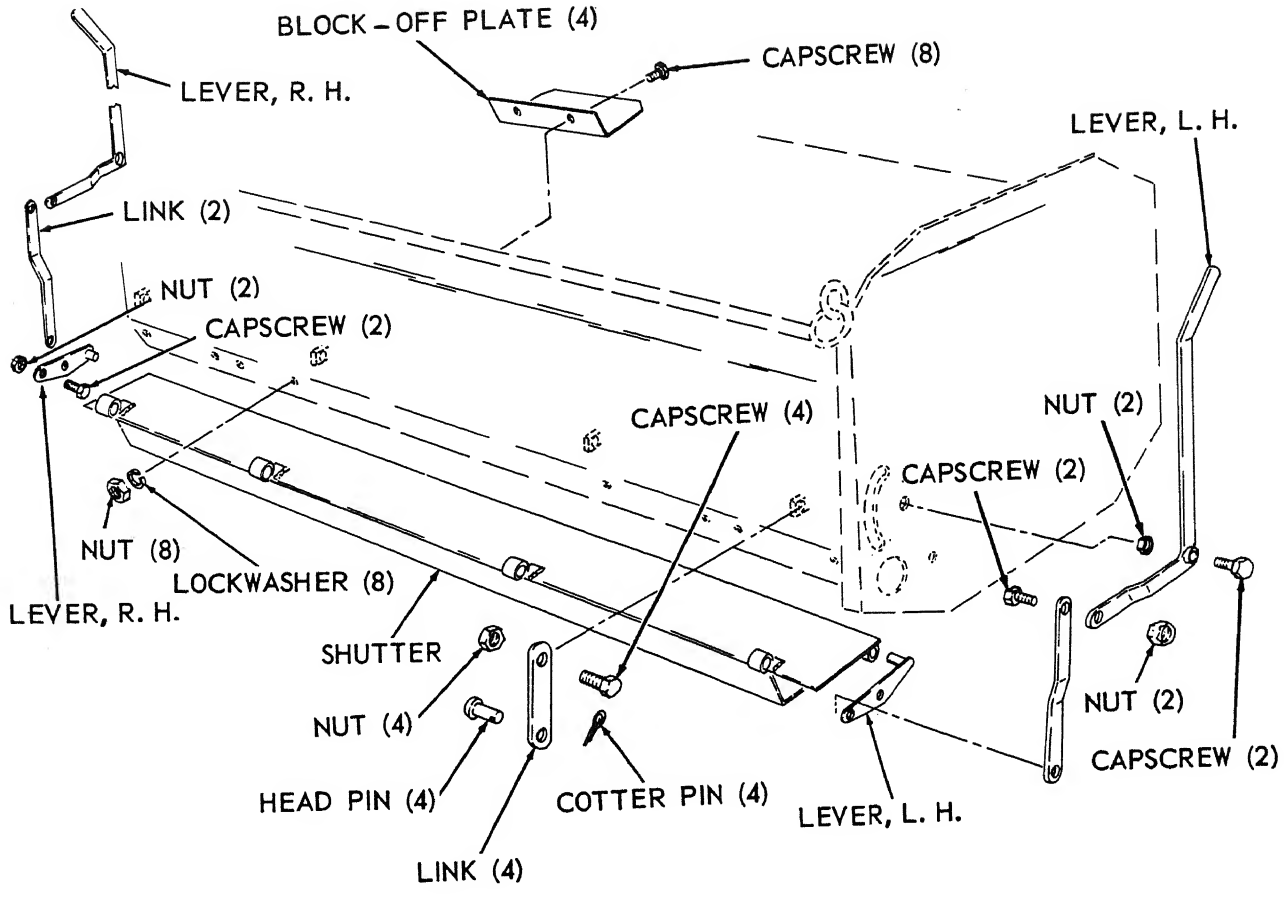


Figure 25. Shutter and shutter control assembly, disassembly and reassembly, exploded view.

Section X. CHAIN DRIVE TRANSMISSION AND ROLLER ASSEMBLIES

56. General

The chain drive transmission consists of the traction drive sprocket and the roller sprocket. The traction wheels transfer the driving power through a chain sprocket coupling and a chain arrangement to the roller. A chain adjustment yoke fits into the slack idler and is used to adjust the tension on the drive chain. The roller assembly consists of a helical grooved, hollow steel roll. The roller is mounted with a bushing on each end of the spreader to insure a smooth, even distribution of aggregate. The roller is keyed to the clutch in the chain drive transmission.

57. Chain Drive Transmission Assembly

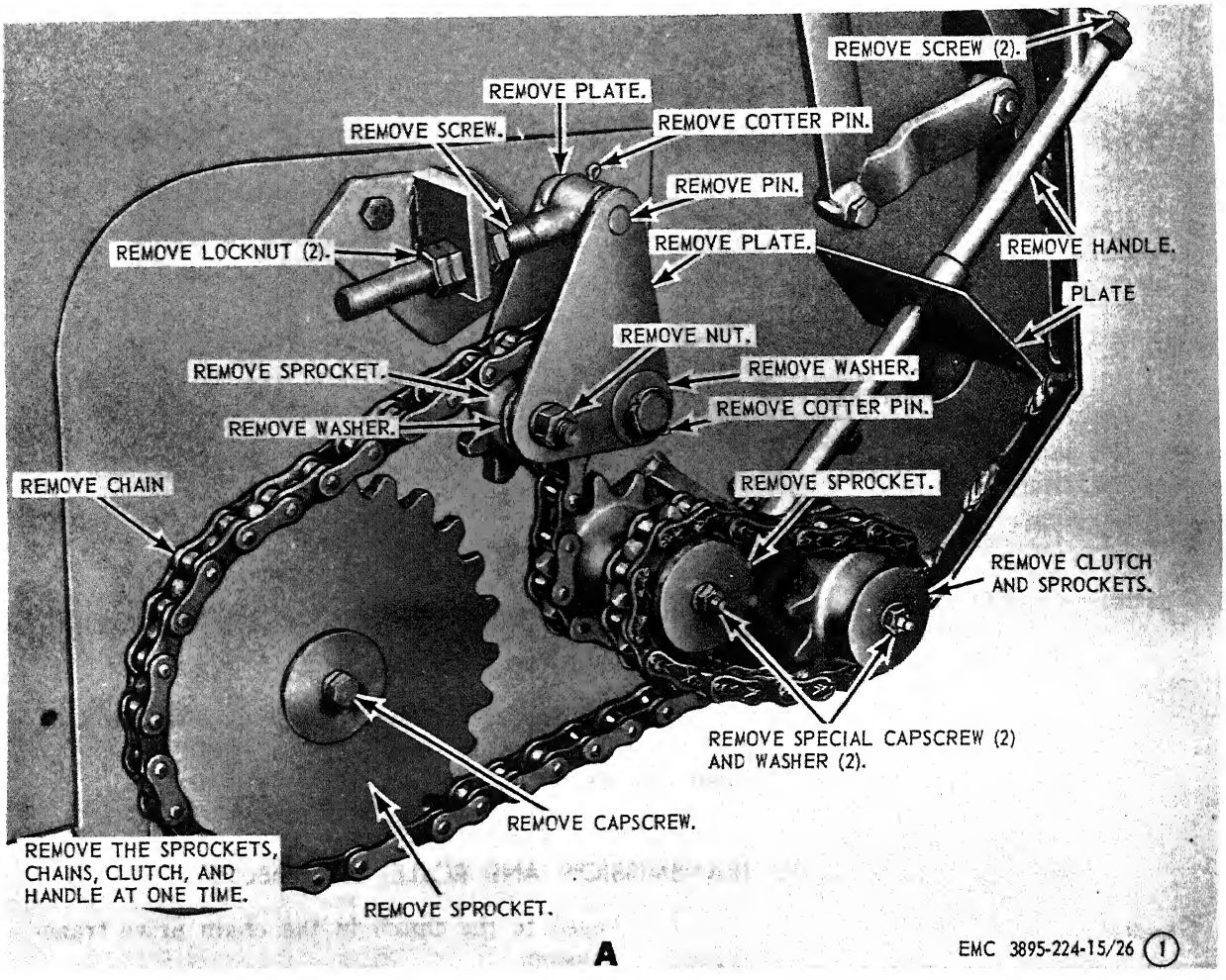
a. Removal.

(1) Remove the three capscrews that hold the cover and gasket to the hopper.

(2) Remove the cover and gasket.

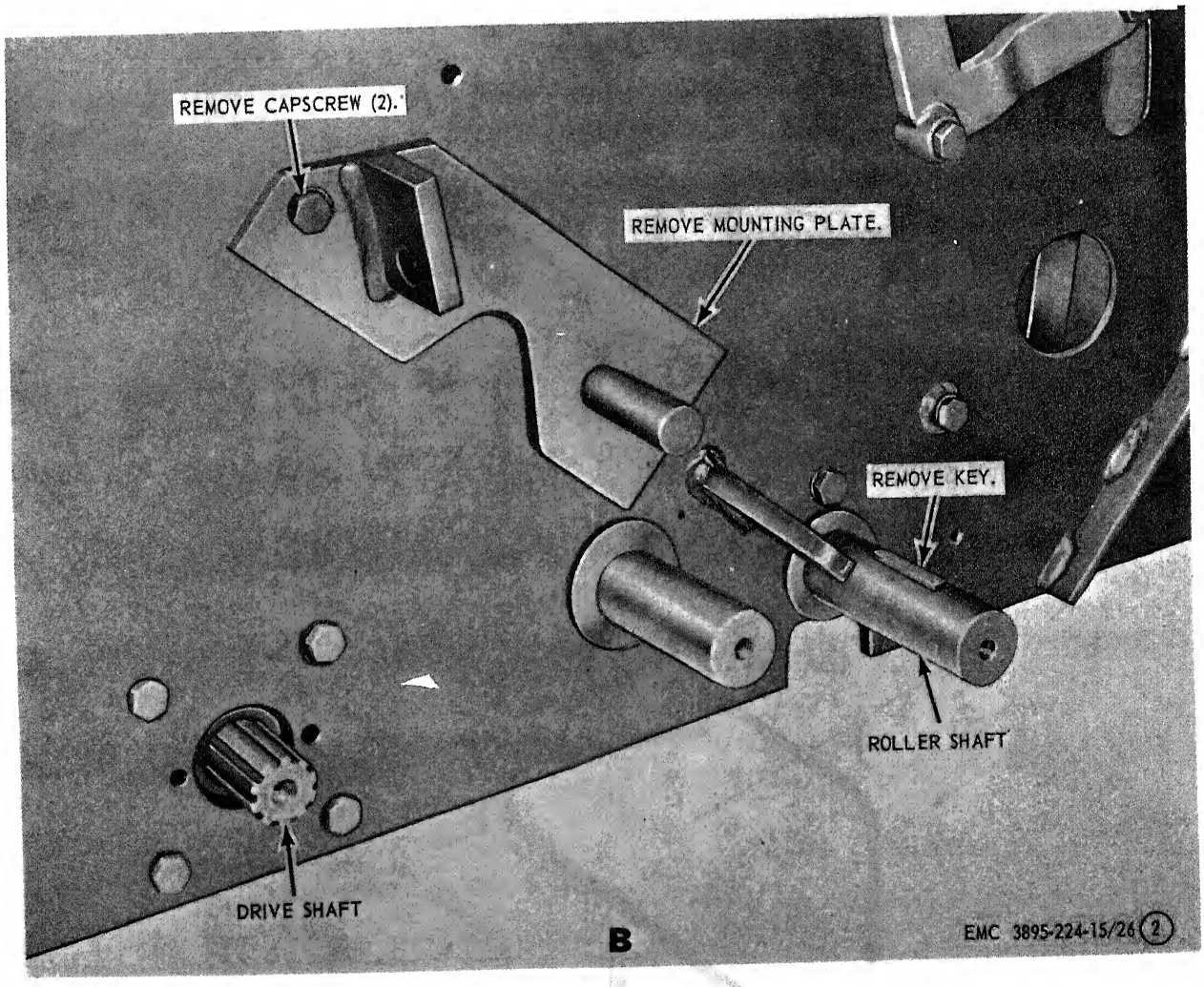
(3) Remove the chain drive transmission assembly as illustrated in figure 26.

b. Disassembly. Disassemble the chain drive transmission as illustrated in figure 27.



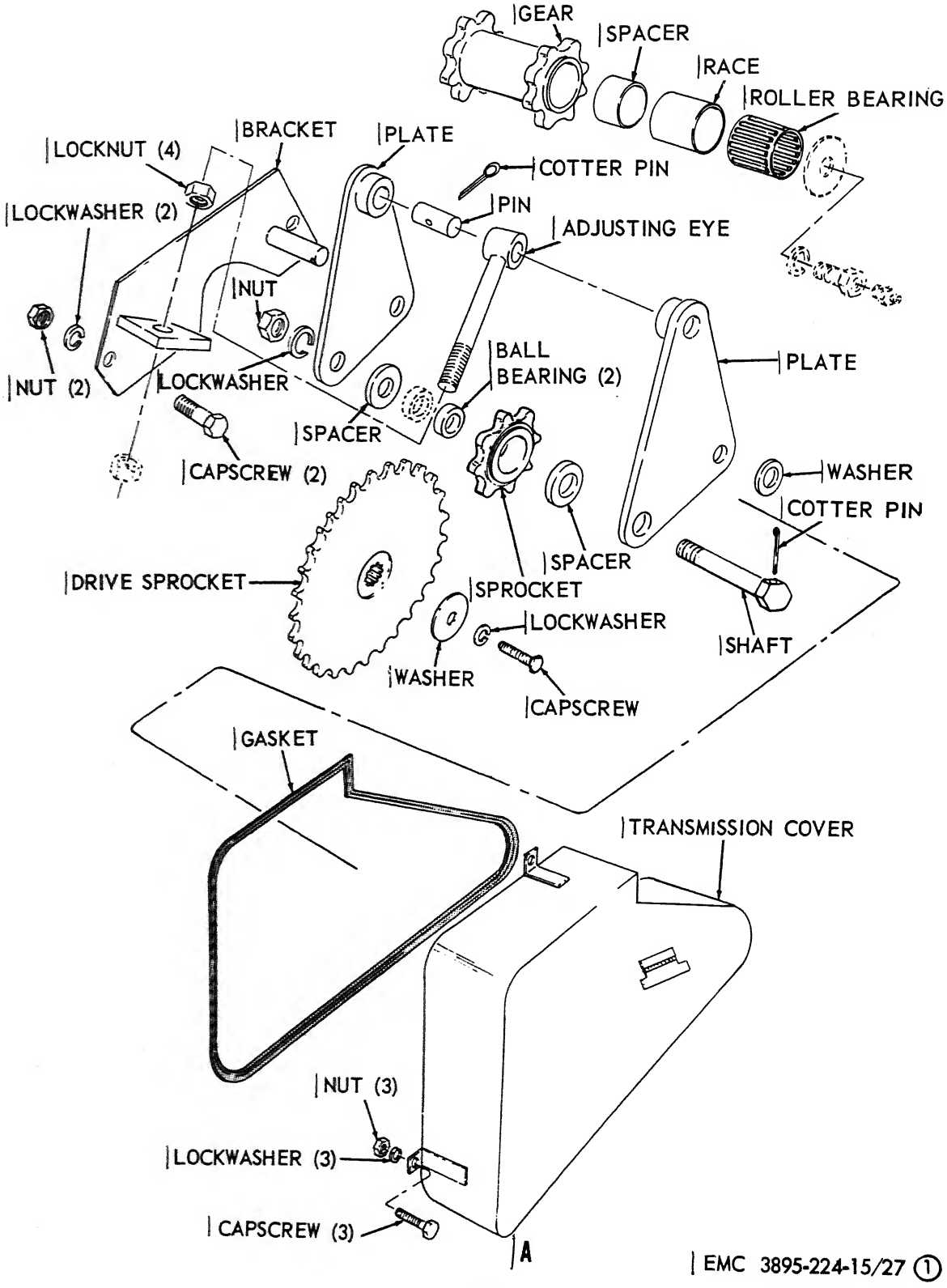
A—Chains and sprockets

Figure 26. Chain drive transmission assembly removal and installation.



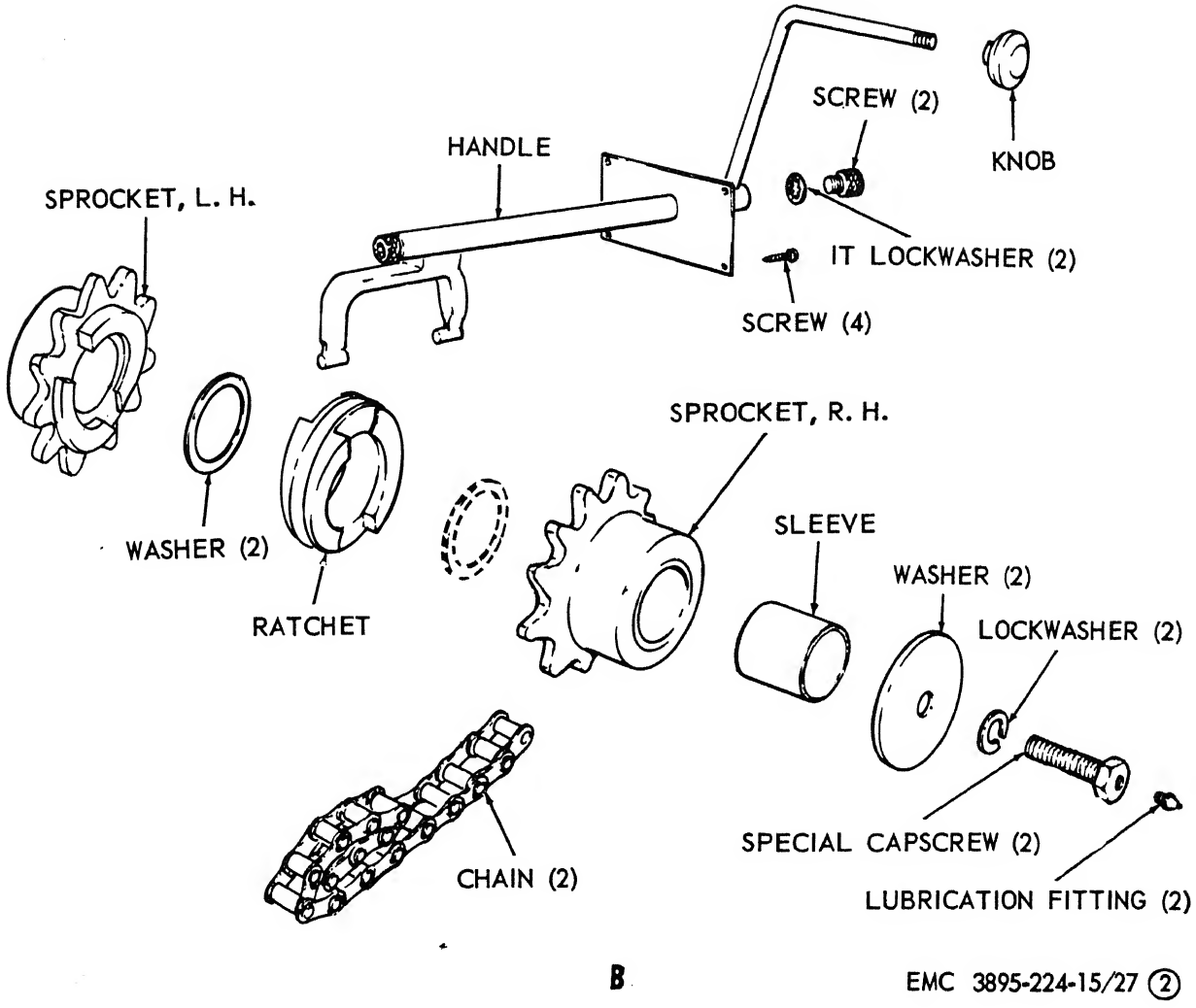
B—Bracket and key

Figure 26—Continued.



A—Sprockets

Figure 27. Chain drive transmission assembly, disassembly and reassembly, exploded view.



B—Clutch

Figure 27—Continued.

c. Cleaning, Inspection, and Repair. Clean all parts in an approved cleaning solvent and dry thoroughly. Inspect all parts for cracks, bends, breaks, or corrosion. Repair or replace all damaged parts.

Figure 28. Roller assembly removal and installation.

d. Reassembly. Reassemble the chain drive transmission as illustrated in figure 27.

e. Installation. Install the chain drive transmission as illustrated in figure 26.

58. Roller Assembly

a. Removal.

(1) Remove the chain drive transmission (par. 57).

(2) Remove the roller assembly as illustrated in figure 28.

b. Disassembly. Disassemble the roller assembly as illustrated in figure 29.

c. Cleaning, Inspection, and Repair. Clean all parts in an approved cleaning solvent and dry thoroughly. Inspect all parts for damage such as bends, breaks, or cracks. Repair or replace all damaged parts.

d. Reassembly. Reassemble the roller assembly as illustrated in figure 29.

e. Installation.

(1) Install the roller assembly as illustrated in figure 28.

(2) Install the chain drive transmission (par. 57).

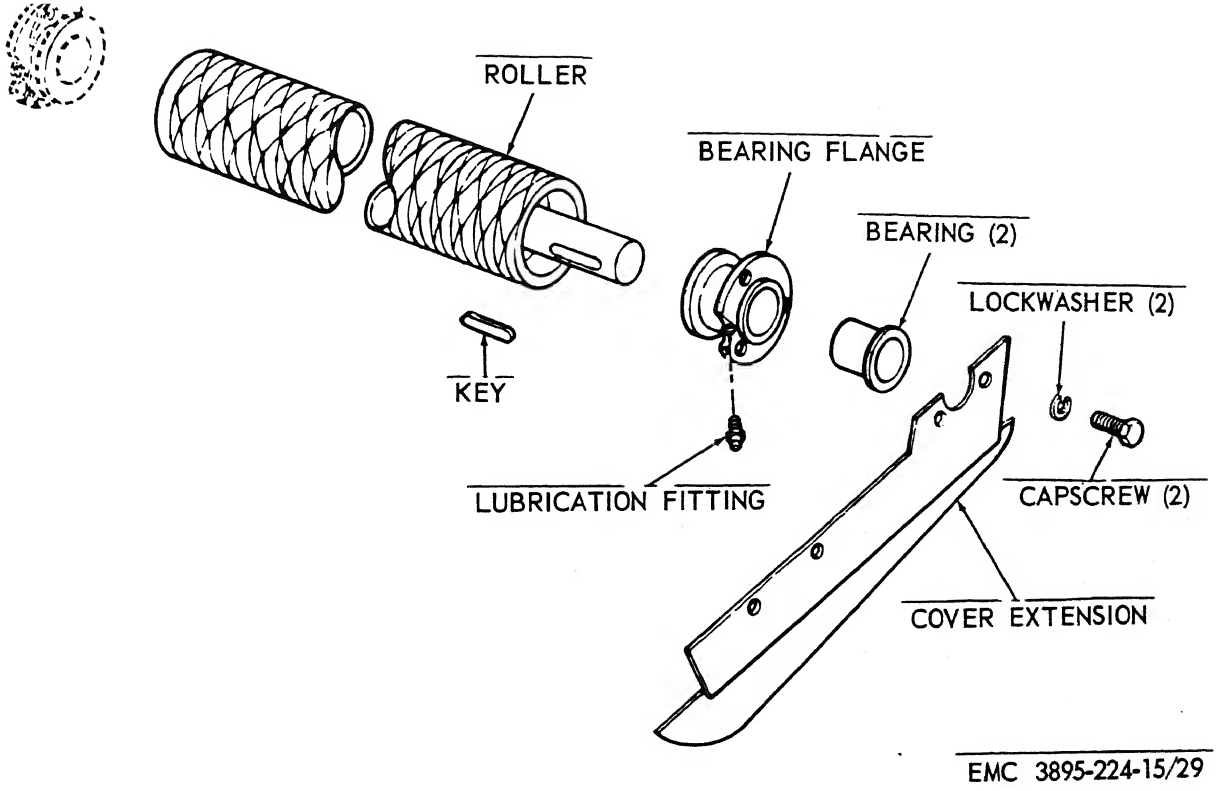


Figure 29. Roller assembly, disassembly and reassembly, exploded view.

Section XI. TRACTION AND SUPPORT WHEEL ASSEMBLIES

59. General

The traction drive and support wheel assemblies are the aggregate spreader's operational running gear. The traction drive wheel assembly is the main driving component of the chain drive transmission. Through a series of sprockets and connecting chains, the driving force is transferred from the traction drive wheels to the roller. The support wheel assembly acts primarily to support the right side of the spreader, keeping the hopper level during operation, insuring a smooth, even spread of material.

60. Traction Wheel Assemblies

a. Removal. Remove the traction wheel assemblies as illustrated in figure 30.

b. Disassembly. Disassemble the traction wheel assemblies as illustrated in figure 31.

c. Cleaning, Inspection, and Repair. Clean all parts in an approved cleaning solvent and dry thoroughly. Inspect all parts for cracks, bends, or breaks. Inspect the tire and tube for cracks, breaks, or punctures. Repair or replace as necessary.

d. Reassembly. Reassemble the traction wheels assemblies as illustrated in figure 31.

e. Installation. Install the traction wheels assemblies as illustrated in figure 30.

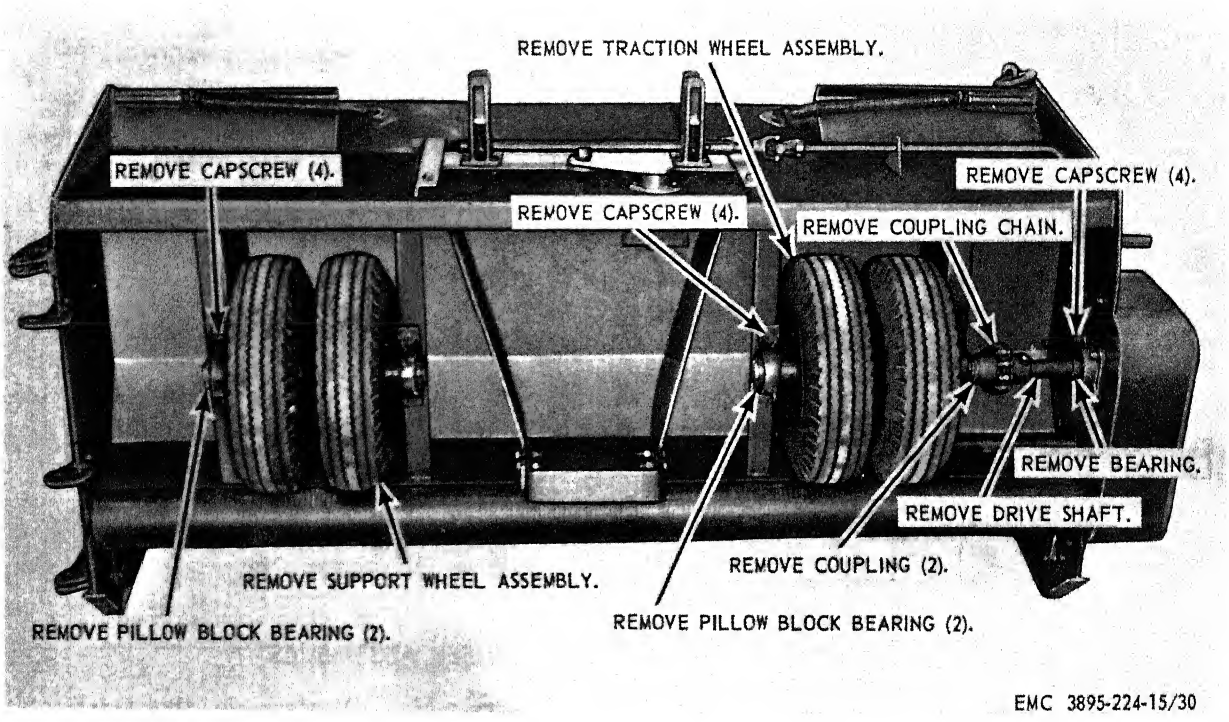


Figure 30. Traction wheels and traction drive shaft assemblies removal and installation.

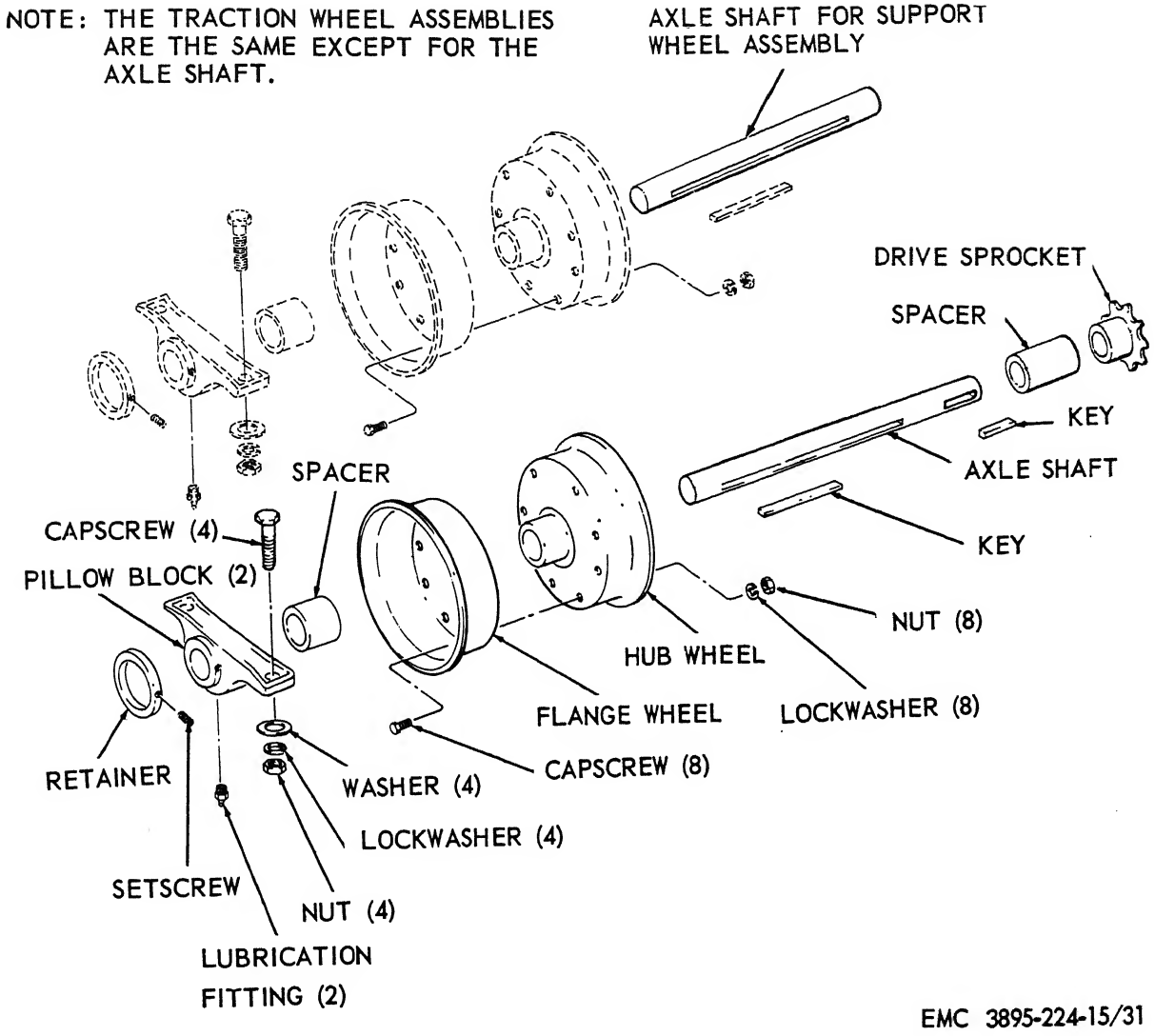


Figure 31. Traction wheels, assemblies, disassembly and reassembly, exploded view.

Section XII. TRACTION DRIVE SHAFT ASSEMBLY

61. General

The traction drive shaft assembly consists of the drive shaft, bearing, sprocket, and collar. The traction drive shaft transfers the power from the traction wheel assembly to the chain drive transmission.

62. Traction Drive Shaft Assembly

a. Removal.

(1) Remove the drive sprocket in the chain drive transmission (par. 57).

(2) Remove the traction wheel assembly (par. 60).

(3) Remove the traction drive shaft as illustrated in figure 30.

b. Disassembly. Disassemble the traction drive shaft assembly as illustrated in figure 32.

c. Cleaning, Inspection, and Repair. Clean all parts in an approved cleaning solvent and dry thoroughly. Inspect all parts for cracks, breaks, or bends. Repair or replace all damaged parts.

d. Reassembly. Reassemble the traction drive assembly as illustrated in figure 32.

e. Installation. Install the traction drive shaft assembly as illustrated in figure 30.

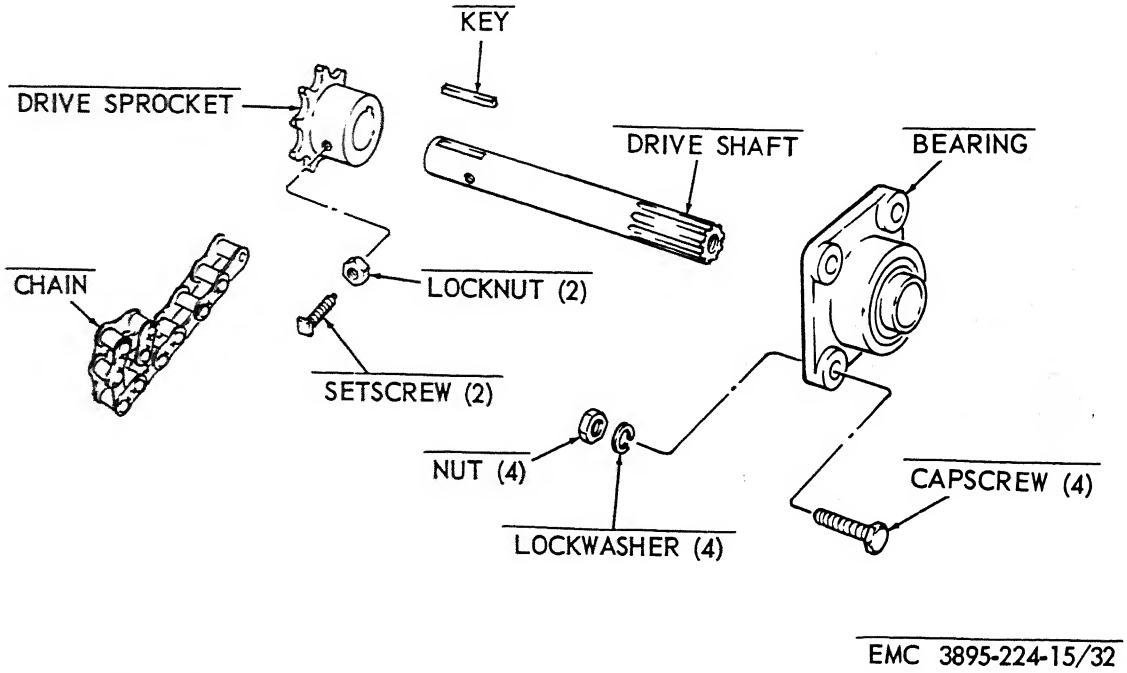


Figure 32. Traction drive shaft assembly, disassembly and reassembly, exploded view.

Section XIII. DATA PLATE MAINTENANCE INSTRUCTIONS

63. General

The Corps of Engineer data plate, transportation data plate, and the manufacturer's data plate are described and located in paragraph 4.

64. Data Plates

a. Removal. Remove the four screws on each plate and remove the plate.

b. Cleaning, Inspection, and Repair. Clean all data plates with an approved cleaning solvent and dry thoroughly. Remove all excess paint. Inspect all data plates for legibility. If they are not legible replace with a fabricated plate.

c. Installation. Replace the data plates in reverse of the removal procedure described in (*a* above).

Note. If the data plate being installed is a fabricated plate, be sure it is identical to the original plate.

CHAPTER 4
DEMOLITION OF MATERIEL TO PREVENT ENEMY USE

65. General

When capture or abandonment of the Aggregate Spreader to an enemy is imminent, the responsible unit commander must make the decision either to destroy the equipment or to render it inoperative. Based on this decision, orders are issued which cover the desired extent of destruction. Whatever method of demolition is employed, it is essential to destroy the same vital parts of all aggregate spreaders and all corresponding repair parts.

66. Demolition to Render Equipment Inoperative

Use sledge hammers, crowbars, picks, axes, or any other heavy tools which may be available to destroy the following:

a. All chains and sprockets in the chain drive transmission.

b. All bearings on the roller and wheel assemblies.

c. Cut or smash all tires and wheel rims, and the shutter gate and controls.

67. Demolition by Explosive or Weapons Fire

a. Demolition by Weapons Fire. Fire on the aggregate spreader using the heaviest practical weapons available. Direct fire at the chain drive transmission, wheel bearing, and the roller assembly.

b. Demolition by Explosives. Place as many of the following charges (fig. 33) as the situation permits, and detonate them simultaneously using a detonating cord and a detonator. Refer to FM 5–25.

(1) One ½-pound charge on left brace.
(2) One ½-pound charge on right brace.
(3) One ½-pound charge on hitch.
(4) Two ½-pound charges on the wheel bearings.
(5) One ½-pound charge on transmission.
(6) Two ½-pound charges between the tires.

68. Other Demolition Methods

a. Scrattering and Concealment. Remove all accessible parts, such as the operator's platform, the chains and sprockets, block-off plates, transport tongue, shutter controls, and wheels. Scatter them through dense foliage, bury them in dirt or sand, or throw them in a lake, stream, well, or other body of water.

b. Submersion of Equipment. Submerge the aggregate spreader in a body of water to provide water damage and concealment. Salt water does greater damage than fresh water.

69. Training

All operators should receive thorough training in the destruction of Aggregate Spreader. Refer to FM 5–25. Simulated destruction, using all of the methods listed above, should be included in the operator training program. It must be emphaized in training, that demolition operations are usually necessitated by critical situations when time available for carrying out destruction is limited. For this reason, it is necessary that operators be thoroughly familiar with all methods of destruction of equipment, and be able to carry out demolition instructions without reference to this or any other manual.

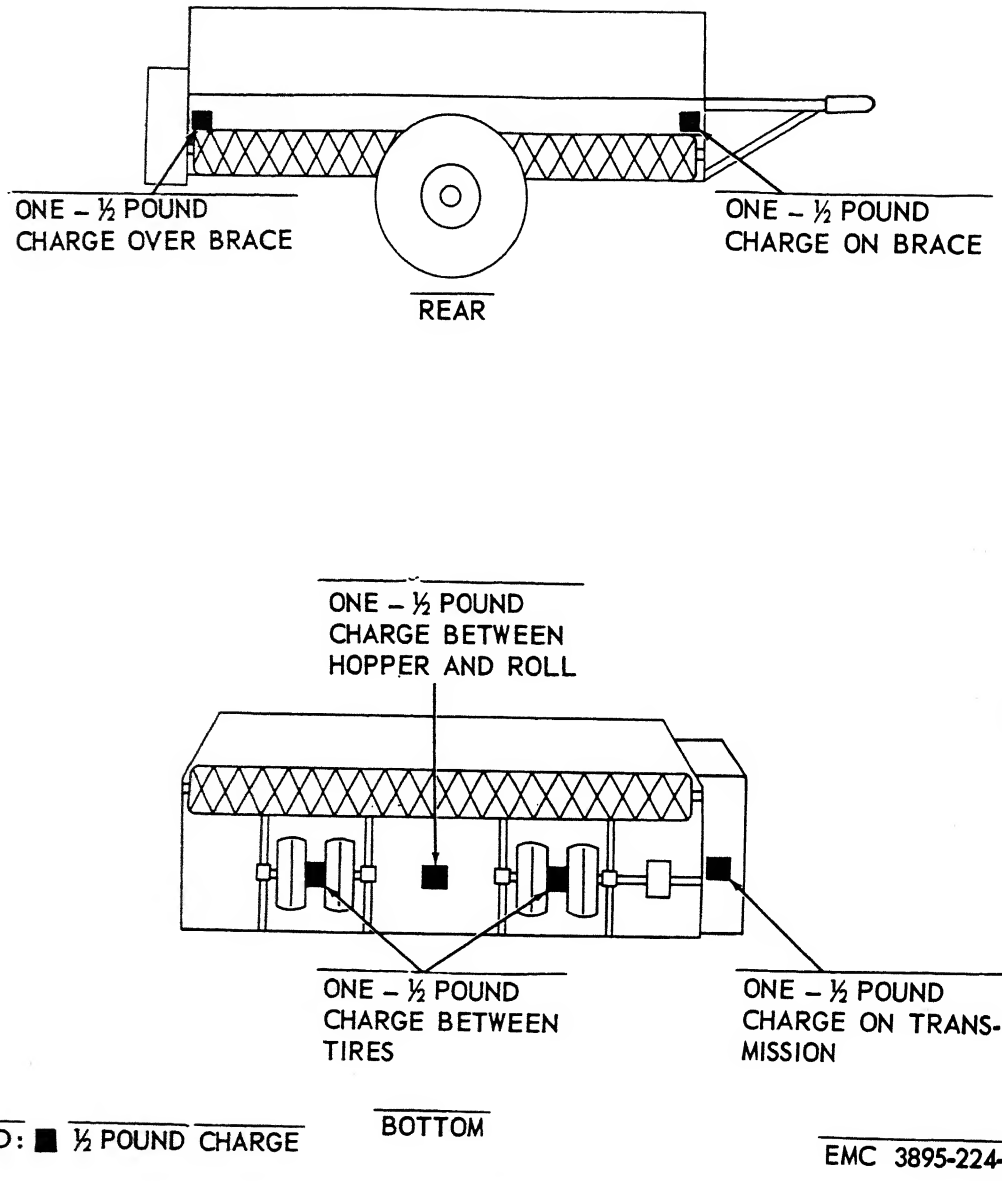


Figure 33. Placement of charges.

CHAPTER 5
SHIPMENT AND LIMITED STORAGE

Section I. SHIPMENT WITHIN ZONE OF INTERIOR

70. Preparation of Equipment For Shipment

a. General. Detailed instructions for the preparation of engineer equipment for domestic shipment are outlined within this paragraph. Preservation will be accomplished in sequence that will not require the operation of previously preserved components.

b. Inspection. Equipment will be inspected for any unusual conditions such as damage, rusting, accumulation of water and pilferage. DA Form 464 (Work Sheet for Preventive Maintenance and Technical Inspection of Engineer Equipment) will be executed on the equipment.

c. Cleaning and Drying. Thorough cleaning and drying by an approved technique is the first essential procedure in any effective preservation process. Approved methods of cleaning, drying types of preservatives and methods of applications are described in TM 38–230.

d. Painting. Paint all surfaces when the paint has been removed or damaged. Refer to TB ENG 60 for detailed cleaning and painting instructions.

e. Depreservation Guide. DA Form 2258 (Depreservation Guide for Engineer Equipment.)

(1) A properly annotated depreservation guide will be completed concurrently with preservation for each item of mechanical equipment with any peculiar requirements outlined in the remarks column. The completed depreservation guide will be placed with the equipment in a waterproof envelope, marked "Depreservation Guide", and fastened in a conspicuous location on or near operator's controls.

(2) Prior to placing equipment in operation or to the extent necessary for inspection, depreservation of the item shall be performed as outlined on the "Depreservation Guide".

f. Exterior Surfaces. Coat exposed machined ferrous metal surfaces with preservative (P–6) conforming with specification MIL–C–11796, Class 3. If preservative is not available cup grease may be used.

g. Marking. Markings shall conform to MIL–STD–129.

h. Pneumatic Tires. Tires shall be inflated to their normal required operating pressure.

i. Disassembly, Disassembled Parts, Basic Issue Items. Disassembly shall be limited to removal of parts and projecting components that tend to increase the overall profile of the equipment and that which is subject to pilferage. Disassembled items shall be packed with the publications in the toolbox if possible. Otherwise items will be packed in a suitable container and secured to the equipment to prevent loss or pilferage.

71. Loading Equipment For Shipment

a. Construct a ramp of suitable material and tow the spreader onto the carrier in reverse of instructions in paragraph 7.

b. If a loading ramp or material is not available and a suitable lifting device is used, the equipment will be loaded as follows:

(1) Attach suitable slings in the same manner described in paragraph 7.

(2) Lift the spreader and position it proportionately on the carrier.

(3) Remove lifting slings from the spreader. Block and secure the spreader as described in paragraph 7.

Section II. LIMITED STORAGE

72. Preparation of Equipment For Storage

a. General. Detailed instructions for preserving and maintaining equipment in limited storage are outlined in these paragraphs. Limited storage is defined as storage not to exceed 6 months. Refer to AR 743–505.

b. Pneumatic Tires. Pneumatic tires standing in storage under load will be inflated to proper pressure. When the equipment is blocked and all weight is removed from the tires, deflate tires to two-thirds normal pressure.

c. Weatherproofing. When suitable shelter is not available, select a firm, level, well-drained storage location, protected from prevailing winds. Position the equipment on heavy planking or other solid surfaces. Block the equipment in a manner to remove all weight from tires. Cover the equipment with a tarpaulin or other suitable waterproof covering and tie it down securely.

73. Inspection and Maintenance of Equipment in Storage

a. Inspection. All equipment in limited storage will be exercised and inspected every 30 days for any unusual conditions such as drainage, rusting, accumulation of water, pilferage, and leaking of lubricants. DA Form 464 will be executed when the spreader is initially placed in limited storage and every 30 days thereafter. Required maintenance will be performed to insure that the equipment is mechanically sound and ready for immediate use.

b. Exercising. Every 30 days, equipment will be inspected as outlined on DA Form 464 and operated long enough to insure complete lubrication of gears, bearings, etc. After each exercising period the equipment will be represerved

c. Represervation. At completion of inspection and exercising, the spreader shall be represerved to meet the requirements of paragraph 68.

CHAPTER 6
FIELD AND DEPOT MAINTENANCE REPAIR INSTRUCTIONS

Section I. GENERAL

74. Scope

a. The following instructions are provided for use of field and depot maintenance personnel. They contain information on the maintenance of the equipment which is beyond the scope of the tools, equipment, personnel, or supplies normally available to organizational maintenance facilities.

b. Appendix I contains a list of all publications applicable to field and depot maintenance facilities for this equipment. Appendix II contains the maintenance allocation chart.

75. Field and Depot Maintenance Record and Report Forms

For record and report forms applicable to third, fourth, and fifth echelons of maintenance refer to TM 5-505.

Section II. DESCRIPTION AND DATA

76. Description

For a complete description of the aggregate spreader refer to paragraph 3.

77. Tabulated Data

a. Nut and Bolt Torque Data. The following apply to clean dry threads. Reduce the torque 10 percent when threads are clean and oiled.

Diameter	*Foot-pounds*
¼ in.	7–9
5/16 in.	13–17
⅜ in.	30–35
7/16 in.	45–50
½ in.	71–75
9/16 in.	90–100
⅝ in.	137–147
¾ in.	240–250
⅞ in.	410–420
1 in.	580–590

b. Manufacture Sizes and Tolerances of Bushing Shafts and Sprockets. The manufacturers size and tolerances are as follows:

	Minimum (inches)	*Maximum (inches)*
Axle shaft, lh	1.650	1.655
Axle shaft, rh	1.650	1.655
Idler shaft	0.6680	0.6690
Idler sprocket	1.574	1.575
Drive shaft	1.284	1.285
Bearing-single row		1.5748
Driven ratchet	1.689	1.693
Ratchet sprocket, rh	1.999	2.001
Ratchet sprocket, lh	1.999	2.001
Counterdrive sprocket	2.5307	2.5317
Coupling half	1.501	1.503
Sprocket coupling half	1.938	1.940
Head bushing	1.690	1.692
Flanged bearing	2.001	2.002
Bushing, id	1.690	1.692
Bushing, od	2.002	2.003

c. Time Standards. Table II lists the number of man-hours required under normal conditions for various operations in the maintenance and repair of the spreader. The man-hours listed are not intended to be rigid standards. Under adverse conditions the operation will take longer whereas under ideal conditions with highly skilled mechanics, most of the operations can be accomplished in less time.

Table II. Time Standards

Removal and Installation

Man/hours

10 FRONT AXLE

1001.1 AXLE AND TONGUE, HOUSING, DRAWBAR, LUNETTE

Tongue, Transport ---------- 0.4

11 REAR AXLE

1101 HOUSING, BEAM, HOUSING COVERS, PLUGS

Axle, Transport ---------- 0.7

(Includes removal and installation of jacks and wheel assembly.)

13 WHEELS AND TRACKS

1311 WHEEL ASSEMBLY

Wheel Assembly (each) ---------- 0.7

1313 TIRES, TUBES

Tires, Transport ---------- 0.6

Tires, Traction ---------- 0.8

(Includes removal and installation of wheels from unit.)

Tubes ---------- 0.9

(Includes removal and installation of wheels from unit and tires from the rims.)

15 FRAME

1501.1 PLATFORM, SUPERSTRUCTURES, RAMPS, CATWALKS

Platform ---------- 0.05

1503 PINTLES AND TOWING ATTACHMENTS

Hitch Assembly ---------- 1.0

(Includes removal and installation of controls.)

1507 LANDING GEAR; LEVELING JACKS (MECHANICAL OR HYDRAULIC)

Landing Gear ---------- 0.2

22 MISCELLANEOUS BODY, CHASSIS OR HULL, AND ACCESSORY ITEMS

2210 DATA PLATES AND INSTRUCTION HOLDERS

Data Plates ---------- 0.3

Instruction Holder ---------- 0.1

26 ACCESSORIES, PUBLICATIONS, TEST EQUIPMENT AND TOOLS

2602.1 ACCESSORIES

Jacks ---------- 0.05

2602.1 COMMON TOOLS

Common Tools ---------- 0.1

2602.4 PUBLICATIONS

Publications ---------- 0.1

73 CONRETE AND ASPHALT EQUIPMENT (MIXERS, PAVERS, SPREADERS, FINISHERS, ETC.)

7303.1 CONTROLS, THICKNESS AND CROWN

Contorls ---------- 1.5

(Includes removal and installation of transmission guard.)

Man/hours

7304 HOPPERS, GATES, CHUTES

Hopper ---------- 6.0

(Includes removal and installation of transport wheels, traction wheels, controls, traction drive feeding shaft, clutch and sprockets.)

Gates ---------- 0.7

(Includes removal and installation of controls.)

Plates, Block-off (each) ---------- 0.2

7305.2 GUARDS, HOUSING, COVERS

Guard ---------- 0.4

7307.5 FEEDING SHAFTS

Roll Assembly ---------- 1.3

(Includes removal and installation of cover, chain, shift, linkage, clutch and sprockets.)

Sprockets, Idler ---------- 0.5

(Includes removal and installation of cover, chain and bracket.)

Clutch ---------- 0.5

(Includes removal and installation of cover, chain and reverse drive sprocket.)

7310 TRACTION DRIVE

Shaft Drive ---------- 0.7

(Includes removal and installation of cover, chain and sprocket.)

Chains ---------- 0.4

7310.1 TRACTION WHEELS

Wheels ---------- 1.1

(Includes removal and installation of pillow blocks.)

Axle ---------- 1.2

(Includes removal and installation of pillow blocks and wheels.)

Pillow Block ---------- 0.8

Lubrication and Service

13 WHEELS AND TRACKS

1311 WHEEL ASSEMBLY

Wheel Assembly ---------- 0.7

(Remove wheel bearings, clean with approved solvent, pack bearings and replace.)

1313 TIRES, TUBES

Tires ---------- 0.1

(Check air pressure and add if necessary.)

15 FRAME

1503 PINTLES AND TOWING ATTACHMENTS

Hitch Assembly ---------- 0.05

(Lubricate fittings.)

26 ACCESSORIES, PUBLICATIONS, TEST EQUIPMENT AND TOOLS

2602.1 ACCESSORIES

Jacks ---------- 0.2

(Wipe clean and lubricate.)

Table II. Time Standards—Continued

	Man/hours
73 CONCRETE AND ASPHALT EQUIPMENT (MIXERS; PAVERS; SPREADERS; FINISHERS, ETC.)	
7307.5 FEEDING SHAFTS	
Roll Assembly	0.1
(Lubricate fittings.)	
7310 TRACTION DRIVE	
Shaft Drive	0.1
(Lubricate fittings.)	
7310.1 TRACTION WHEELS	
Pillow Blocks	0.1
(Lubricate fittings.)	

Section III. SPECIAL TOOLS AND EQUIPMENT

78. Special Tools and Equipment

There are no special tools or equipment required to perform field and depot maintenance on the aggregate spreader.

79. Field and Depot Maintenance Repair Parts

Field and depot maintenance repair parts are listed and illustrated in TM 5–3895–224–25P.

CHAPTER 7
HOPPER MAINTENANCE INSTRUCTIONS

80. Hopper Removal

Remove the hopper assembly as follows:

a. Remove the transport wheel assembly (par. 44).

b. Remove the stands (par. 41).

c. Remove the transport tongue (par. 46).

d. Remove the spreader hitch (par. 48).

e. Remove the operator's platform (par. 51).

f. Remove the block-off plates (par. 52).

g. Remove the shutter and shutter controls (pars. 54 and 55).

h. Remove the chain drive transmission (par. 57).

i. Remove the roller assembly (par. 58).

j. Remove the traction and support wheel assemblies (par. 60).

k. Remove the traction drive shaft (par. 62).

l. Remove the data plates (par. 64).

81. Hopper Cleaning, Inspection, and Repair

Clean the hopper with an approved cleaning solvent and dry thoroughly. Inspect for cracks, breaks, bends, or any other damage. Replace or repair all damaged sections.

82. Hopper Installation

Install the hopper assembly as follows:

a. Install data plates (par. 64).

b. Install the traction drive shaft (par. 62).

c. Install the traction and support wheel assemblies (par. 60).

d. Install roller assembly (par. 58).

e. Install chain drive transmission (par. 57).

f. Install shutter and shutter controls (pars. 54 and 55).

g. Install block-off plates (par. 52).

h. Install operator's platform (par. 51).

i. Install spreader hitch (par. 48).

j. Install transport tongue (par. 46).

k. Install stands (par. 41).

l. Install transport wheel assembly (par. 44).

APPENDIX I
REFERENCES

1. Dictionaries of Terms and Abbreviations

AR 320–5	Dictonary of United States Army Terms
AR 320–50	Authorized Abbreviations and Brevity Codes

2. Lubrication

LO 5–3895–224–15	Spreader, Aggregate (Model M5–8 Ft)

3. Painting

TB ENG 60	Preservation and Painting of Serviceable Corps of Engineer Equipment

4. Preventive Maintenance

TM 5–505	Maintenance of Engineer Equipment
AR 750–5	Maintenance Responsibilities and Shop Operation
TM 38–230	Preservation, Packaging, and Packing Military Supplies and Equipment
AR 743–505	Limited Storage of Engineer Mechanical Equipment

5. Publication Indexes

DA Pam 310–2	Index of Blank Forms
DA Pam 310–3	Index of Training Publications
DA Pam 310–4	Index of Technical Manuals, Technical Bulletins, Supply Bulletins, Lubrication Orders, and Modification Work Orders

6. Supply Publications

TM 5–3895–224–25P	Organizational, Field and Depot Maintenance Repair Parts and Special Tools Lists

7. Training Aids

FM 5–25	Explosives and Demolitions

APPENDIX II
MAINTENANCE ALLOCATION

Section I. INTRODUCTION

1. General

This appendix contains explanations of all maintenance and repair functions authorized for the various echelons. Section II contains the maintenance allocation chart.

2. Maintenance

Maintenance is any action taken to keep materiel in a serviceable condition or to restore it to serviceability when it is unserviceable. Maintenance of materiel includes the following:

a. Service. To clean, to preserve, and to replenish fuel and lubricants.

b. Adjust. To regulate periodically to prevent malfunction.

c. Inspect. To verify serviceability and to detect incipient mechanical failure by scrutiny.

d. Test. To verify serviceability and to detect incipient mechanical failure by use of special equipment such as gages, meters, and so on.

e. Replace. To substitute serviceable assemblies, subassemblies, and parts for unserviceable components.

f. Rebuild. To restore an item to a standard as near as possible to original or new condition in appearance, performance and life expectancy. This is accomplished through the maintenance technique of complete disassembly of the item, inspection of all parts or components, repair or replacement of worn or unserviceable elements using original manufacturing tolerances and/or specifications and subsequent reassembly of the item.

g. Overhaul. To restore an item to completely serviceable condition as prescribed by serviceability standards developed and published by heads of technical services. This is accomplished through employment of the technique of "Inspect and Repair Only as Necessary" (IROAN). Maximum utilization of diagnostic and test equipment is combined with minimum disassembly of the item during the overhaul process.

h. Repair. To restore an item to serviceable condition through correction of a specific failure or unserviceable condition. This function includes but is not limited to, inspect, cleaning, pre-serving, adjusting, replacing, welding, riveting, and straightening.

3. Explanation of Columns

a. Functional Group. The functional group is a numerical group set up on a functional basis. The applicable functional grouping indexes are taken from the Corps of Engineers functional grouping indexes, and appear on the maintenance allocation chart in their correct numerical sequence. These indexes are normally set up according to their proximity to each other and their function.

b. Components and Related Operation. This column contains the functional index group heading, subgroup headings, and a brief description of the part starting with the noun name. It also designates the operation to be performed such as service, adjust, inspect, test, replace, repair, and overhaul.

c. Echelons of Maintenance. This column contains the various echelons of maintenance by number designation. An X placed in the appropriate echelon column and in line with an indicated maintenance function, authorizes the particular echelon to perform the function. The symbol X indicates the lowest echelon responsible for performing that particular function. The X does not necessarily indicate repair parts

will be stocked at that level. Echelons higher than the echelon annotated by X are authorized to perform the indicated function.

d. Remarks. The remarks column is used to explain why the maintenance function which is normally performed at a lower echelon is moved to a higher echelon. When the remark "special tool required" is indicated, applicable technical manuals will be consulted for its use and for requisitioning purposes.

Section II. MAINTENANCE ALLOCATION CHART

Functional group	Components and related operation	Echelons of maintenance					Remarks
		1	2	3	4	5	
10	FRONT AXLE.						
1001.1	Axle and Tongue, Housing, Drawbar, Lunette.						
	Tongue, transport:						
	Replace	X					
	Repair	------	X				
11	REAR AXLE.						
1101	Housing, Beam, Housing Covers, Plugs.						
	Axle transport:						
	Repair	------	X				
13	WHEELS AND TRACKS.						
1311	Wheel Assembly.						
	Wheel Assembly:						
	Service	------	X				
	Adjust	------	X				
	Replace	------	X				
	Repair	------	X				
1313	Tires, Tubes.						
	Tires:						
	Service	X					
	Replace	------	X				
	Tubes:						
	Replace	------	X				
	Repair	------	X				
15	FRAME.						
1501.1	Platforms, Superstructures, Ramps, Catwalks.						
	Platform:						
	Repair	------	X				
1503	Pintles and Towing Attachments.						
	Hitch assembly:						
	Service	X					
	Replace	------	X				
	Repair	------	X				
1507	Landing Gear; Leveling Jacks (Mechanical or Hydraulic).						
	Landing gear:						
	Replace	X					
22	MISCELLANEOUS BODY, CHASSIS OR HULL, AND ACCESSORY ITEMS.						
2210	Data Plates and Instruction Holders.						
	Data plates:						
	Replace	------	------	X			
	Instruction holder:						
	Replace	------	X				

Functional group	Components and related operation	Echelons of maintenance					Remarks
		1	2	3	4	5	
26	ACCESORIES, PUBLICATIONS, TEST EQUIPMENT AND TOOLS.						
2602.1	Accessories.						
	Jacks:						
	Service	X					
	Replace	X					
2602.2	Common Tools.						
	Common Tools:						
	Replace	X					
2602.4	Publications.						
	Publications:						
	Replace	X					
73	CONCRETE AND ASPHALT EQUIPMENT (MIXERS; PAVERS; SPREADERS; FINISHERS, ETC.)						
7303.1	Controls; Thickness and Crown,						
	Controls:						
	Repair	------	X				
7304	Hoppers, Gates, Chutes:						
	Hopper:						
	Repair	------	X				
	Gates:						
	Replace	------	X				
	Plates, block-off:						
	Replace	X					
7305.2	Guards, Housings, Covers.						
	Guard:						
	Repair	------	X				
7307.5	Feeding Shafts.						
	Roll assembly:						
	Service	X					
	Repair	------	X				
	Sprockets, idlers:						
	Adjust	------	X				
	Replace	------	X				
	Clutch:						
	Replace	------	X				
	Repair	------	X				
7310	Traction Drive.						
	Shaft drive:						
	Service	X					
	Replace	------	X				
	Repair	------	X				
	Chains:						
	Replace	------	X				
7310.1	Traction Wheels.						
	Wheels:						
	Repair	------	X				
	Axle:						
	Replace	------	X				
	Pillow block:						
	Service	X					
	Replace	------	X				

APPENDIX III
BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

1. General

This appendix lists the accessories, tools, and publications required in 1st echelon maintenance and operation, initially issued with, or authorized for the aggregate spreader.

2. Explanation of Columns

a. Source Codes. The information provided in each column is as follows:

(1) *Technical service.* This column lists the basic number (or symbol) of the technical service assigned supply responsibility for the part. Those spaces left blank denote Corps of Engineers supply responsibility. General Engineer supply parts are identified by the letters GE in parentheses, following the nomenclature in the description column. Other technical services basic numbers (or symbols) are—

10—Quartermaster Corps
12—Adjutant General's Corps

(2) *Source.* The selection status and source of supply for each part are indicated by one of the following code symbols:

(*a*) P—applied to high-mortality repair parts which are stocked in or supplied from the technical service depot system, and authorized for use at indicated maintenance echelons.

(*b*) X2—applied to repair parts which are not stocked. The indicated maintenance echelon requiring such repair parts will attempt to obtain them through cannibalization; if not obtainable through cannibalization, such repair parts will be requisitioned with supporting justification through normal supply channels.

(3) *Maintenance.* The lowest maintenance echelon authorized to use, stock, install, or manufacture the part is indicated by the following code symbol:

O—Organizational Maintenance (1st and 2d echelon)

b. Federal Stock Numbers. When a Federal stock number is available for a part, it shall be shown in this column, and used for requisitioning purposes.

c. Description.

(1) The item name and a brief description of the part are shown.

(2) A five-digit Federal supply code for manufactures and/or other technical services is shown in parentheses followed by the manufacturer's part number. This number shall be used for requisitioning purposes when no Federal stock number is indicated in the Federal stock number column.

Example: (07505) J4.

(3) The letters GE, shown in parentheses immediately following the description, indicate General Engineer supply responsibility for the part.

d. Unit of Issue. Where no abbreviation is shown in this column, the unit of issue is "each."

e. Expendability. Those items classified as nonexpendable are indicated by letters NX. Items not indicated by NX are expendable.

f. Quantity Authorized. This column lists the quantities or repair parts, accessories, tools, or publications authorized for issue to the equipment operator or crew as required.

g. Quantity Issued with Equipment. This column lists the quantities of repair parts, accessories, tools, or publications that are initially issued with each item of equipment. Those indicated by an asterisk are to be requisitioned through normal supply channels as required.

h. Illustrations. This column is subdivided into two columns which provide the following information:

(1) *Figure number.* Provides the identifying number of the illustration.

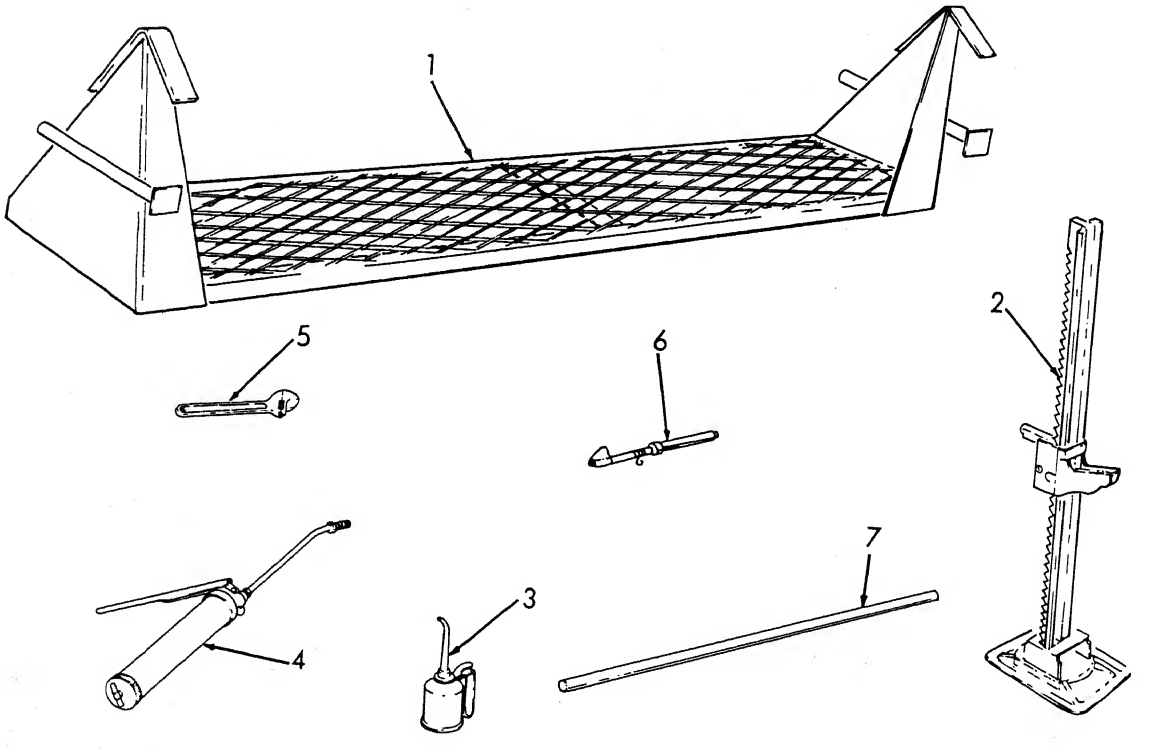
(2) *Item number.* Provides the referenced number for the part shown in the illustration.

3. Index to Federal Supply Code for Manufacturers

80226—Garwood Industries, Inc.
07505—Blackhawk Mfg. Co.

4. Comments and Suggestions

Suggestions and recommendations for changes to the basic issue item list shall be submitted on DA Form 2028 to the Commanding General, Military Construction Supply Agency/ U.S. Army Engineer Maintenance Center, Corps of Engineers, ATTN: MCSDM, P.O. Box 119, Columbus 16, Ohio. Direct communication is authorized.



EMC 3895-224-15/34

1 Operator's platform
2 Bumper jack (2 rqr)
3 Hand oiler
4 Hand grease gun
5 Adjustable wrench
6 Tire pressure gage
7 Jack handle

Figure 34. Basic issue items.

Section II. BASIC ISSUE ITEMS LIST

Source codes				Federal stock No.	Description	Unit of issue	Expendability	Quantity authorized	Quantity issued with equipment	Illustration	
Technical service	Source	Maintenance	Recoverability							Fig.	Item
					GROUP 15—FRAME 1501.1 PLATFORMS, SUPERSTRUCTURES, RAMPS, CATWALKS						
	X2	O	----	----------	PLATFORM: operator (80226) 8021544.	-----	----	1	1	36	1
					GROUP 26—ACCESSORIES, PUBLICATIONS, TEST EQUIPMENT AND TOOLS						
					2602.1 ACCESSORIES						
	P	O	----	7610–355–7130	CASE: operations and maintenance publications, cotton duck, water repellent, and mildew resistant, MIL–B–11743B (GE).	-----	----	1	1		
	X2	O	----	----------	JACK, BUMPER (07505) J4 ----	-----	----	2	2	36	2
					2602.2 COMMON TOOLS						
	P	O	----	4910–273–3362	GAGE, TIRE, PRESSURE: 10 to 160 pound range.	-----	----	1	(*)	36	6
	P	O	----	4930–360–2801	GREASE GUN, HAND: lever operated, 16 ounce capacity.	-----	----	1	(*)	36	4
	P	O	----	4930–273–3644	OILER, HAND: 8 ounce capacity, pump force fed.	-----	----	1	(*)	36	3
10	P	O	----	5120–449–8083	WRENCH, OPEN END, ADJUSTABLE: single head, 0 to 1.135 inches jaw opening, 10 inches long.	-----	----	2	(*)	36	5
					2602.4 PUBLICATIONS						
12	----	----	----	----------	DEPARTMENT OF THE ARMY LUBRICATION ORDER LO 5–3895–224–15.	-----	----	1	1		
12	----	----	----	----------	DEPARTMENT OF THE ARMY OPERATOR, ORGANIZATIONAL, FIELD AND DEPOT MAINTENANCE MANUAL TM 5–3895–224–15.	-----	----	2	2		
					DEPARTMENT OF THE ARMY ORGANIZATIONAL, FIELD AND DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOL LISTS TM 5–3895–224–25P.	-----	----	2	2		

INDEX

BY ORDER OF THE SECRETARY OF THE ARMY:

G. H. DECKER,
General, United States Army,
Chief of Staff.

Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

Distribution:

Active Army:

USASA (2)
DCSLOG (1)
CNGB (1)
Tech Stf, DA (1) except
  CofEngrs (3)
Army Maint Bd (1)
USCONARC (3)
USAARTYBD (2)
USAARMBD (2)
USAIB (2)
USARADBD (2)
USAABELCTBD (2)
USAAVNBD (2)
ARADCOM (2)
ARADCOM Rgn (2)
OS Maj Comd (5) except
  USASETAF (2)
  USARJ (10)
MDW (1)
Armies (2)
Corps (2)
Div (2)
Engr Bde (1)
Svc Colleges. (2)
Br Svc Sch (2) except
  USAES (100)
USMA (2)
GENDEP (2) except
  Schenectady GENDEP (4)
  Atlanta GENDEP (4)
  Utah GENDEP (4)
  Memphis GENDEP (4)
  Sharpe GENDEP (4)
Engr Sec, GENDEP (10)
Engr Dep (10) except
  Granite City Engr Dep (14)
USA Trans Tml Comd (2)
Army Tml (1)
OSA (2)
Engr Dist (2) except
  Buffalo Engr Dist (1)
  Chicago Engr Dist (1)
  Detroit Engr Dist (1)
  Alaska Engr Dist (1)
  Los Angeles Engr Dist (1)
  New Orleans Engr Dist (1)
  New York Engr Dist (1)
  Louisville Engr Dist (1)
  Pittsburgh Engr Dist (1)
  San Francisco Engr Dist (1)
  Omaha Engr Dist (1)
  Seattle Engr Dist (1)
  Kansas City Engr Dist (1)
  Baltimore Engr Dist (1)
  Ft Worth Engr Dist (1)
  Eastern Ocean Engr Dist (1)
  Philadelphia Engr Dist (1)
  Rock Island Engr Dist (1)
  St Louis Engr Dist (1)
  St Paul Engr Dist (1)
Div Engr (2) except
  Lower Miss Valley Div Engr (none)
  North Central Div Engr (none)
Engr Fld Maint Shops (2)
Engr Dep Maint Shops (2)
USAERDL (3)
Engr Cen (5)
AMS (3)
USA Engr Proc Ofc (10)
EMC (26)
ESCO (10)
Fld Comd, DASA (8)
AFSSC (1)
USACOMZEUR (2)
USAREUR Engr Sup Con Agcy (10)
USAREUR Engr Proc Cen (2)
USA Corps (1)
MAAG (1)
JBUSMC (1)
Units org under fol TOE:
  5-48 (2)
  5-114 (2)
  5-115 (2)
  5-117 (2)
  5-237 (5)
  5-262 (5)
  5-267 (1)
  5-278 (5)
  5-279 (2)
  5-500 (EA, EB) (2)

NG: State AG (3).

USAR: Same as Active Army except allowance is one copy to each unit.

For explanation of abbreviations used, see AR 320-50.